

STUDIES OF LOCAL OPEN SPACE IN BRITISH HOUSING

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SYNOPSIS

This study of local open space in British housing since 1800 takes the form of a sequence of essays. The subject is treated selectively but in historical sequence, and concentrates on topics hitherto neglected. Two themes recur: the first concerns the justification for providing urban open space, and the second the grouping of housing around shared local open space. The introductory essay shows how the justification for providing urban open spaces in Britain during the Nineteenth Century was greatly affected by the inadequacies of local government. The following chapter reviews the extent to which open space was looked upon as a purely sanitary investment until medical science had discounted a number of misconceptions and demonstrated the value of recreation and outdoor exercise. Succeeding chapters examine some early attempts to provide local open space at least in part for motives of recreation (notably chapter 5), while chapters 6, 7 and 8 deal with different aspects of acceptance of the need for local open space and, in particular, the need to escape from the city and re-establish contact with Nature and the simple rural life, or its semblance. The second theme of study is introduced in chapter 3, which looks at early attempts to associate shared open space with the parallelogram, and how this form was abused in the Scots tenement. The following chapters review the essential differences between the Scots tenement and English cottage, the general preference for the latter, and the influence of the English village green on the provision and treatment of shared local open space in present day housing. Chapters 9 and 10 consider in detail the problems concerned with providing and managing such space. The concluding chapter reaches a number of general conclusions on the two themes of study.

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CHAPTER ONE
INTRODUCTION

CIVIL & SANITARY ORDER

In 1885, the great Victorian administrator and reformer Sir Edwin Chadwick, looking back on his long life time devoted to civic improvement, commented that:

"The provision of the means of recreation is one of the highest services that may be rendered by a local authority for self-government, and especially when it contributes properly arranged and attractive exercise grounds".¹

The creation and successful management of urban open space required for him a very high level of skill and coordination, and served as a measure of the assurance and maturity of a local authority. Few authorities in Britain even at that time could claim such maturity, for in the scramble to reform local administration, to carry out basic sanitary improvement, and keep pace with growth, the provision of recreational open space for its own sake had been largely ignored.

Many towns it is true had their large parks, either privately benefacted, or financed by tolerant ratepayers or the Public Works loan Board, but at a more local level, few had achieved adequate provision of open space to offset the effects of their poorest and most densely populated housing. Such space was undoubtedly one of the most awkward commodities a local authority could be expected to provide. It needed strict regulation to prevent abuse and disorder, and in addition to the cost of acquisition, required servicing, patrolling, lighting, cleansing, draining and paving; and, where it was provided, it was usually for reasons entirely secondary to recreation and amenity.

1. Chadwick E. On the Evils of Disunity in Central and local Government, London 1885 p42.

It is important to see the provision of such local open space in British housing against the slow transfer which took place during the nineteenth and early twentieth centuries as Westminster reformed and centralised its control over local authorities; and as it used exchequer aid and extended rating power to gain an effective interest in one local service after another - an interest administered through an increasing number of central government boards.

The process of restructuring and centralising local government had effectively begun in 1801 with the institution of a regular national census. It was essential for efficient policy making and administration, particularly at a time of rapid change, to have accurate statistics on the nature, range and distribution of population, and on employment and living conditions; by 1831 the census was providing much of this detail. Even the crude and incomplete 1801 census was useful¹; it showed for example that the 367 dwellings in Glasgow's Gorbals were inhabited by no fewer than 1055 families while the 1821 census revealed an average occupancy rate of 1.3 families for every dwelling in Scotland² - a striking measure of general overcrowding, in excess of England and Wales, and one which was to grow worse as time went on.

The census figures over the whole of the nineteenth century indicate as clearly as any physical evidence, the dramatic nature of the shift from country to town. In 1801 there was one agricultural worker in Britain for every man employed in a trade or manufactory; one hundred years later there was only one agricultural worker for every ten otherwise employed.

1. Rickman J. Abstract of the Answers and Returns.....of the Population of Great Britain... London 1801.
The first census did not distinguish male and female, children or servants, and not until 1831 was detailed information on occupations secured.
2. exact comparisons are not possible due to changes in the definition of terms. The comparable figure for England and Wales in 1821 was 1.19 families/dwelling and by 1901 this had fallen to 1.04.
(See Cleland J. Enumeration of the Inhabitants of Scotland 1828 pp 67-68 & 1901 Census ed 2174.

In 1811, 18.5% of the total Scots population of 1.8 million was living in the eight largest towns; by 1901 the population had more than doubled, and nearly 40% were living in the same eight towns.¹

In 1837 the first Registrar-General was appointed. His statistical adviser, Dr. Farr, developed the census material and by relating it to the incidence of births and deaths was able to demonstrate what was widely considered to be a causal relationship between degrees of overcrowding and increasing mortality.² This was to become a powerful weapon against laggard local authorities, and one used also in favour of lower densities and more open space.

The divided and uneasy relationship between central and local government during the early years of the nineteenth century is reflected in the nature of the legislation dealt with by Parliament. Spiller, the librarian of the House of Commons, introducing the index to the general statutes from 1801 to 1828, commented that:

"The number and description of the local and personal acts of each session is not unworthy the attention of the political economist who can nowhere find a more authentic record of the degree of enterprise in each year; indeed of the course of National Improvement..."³

1 Rickman J ibid, and Eleventh Decennial Census of Great Britain 1901 Commands 1257 & 2173 HMSO 1902

2 for further detail see Farr, W Vital Statistics London 1885. Farr considered that he had found a mathematical relationship between mortality and population density, see pp 172-3. He proposed that the mortality of a district was nearly as the twelfth root of its density.

3 Spiller, B. Index to the Public General Statutes of the UK. 1801-1828 p.ix.

Between 1801 and 1828, a total of 9,961 parliamentary acts were passed.¹ One-third of these were public and concerned mainly with trade and defence. The remaining two-thirds were local, personal and private acts, and over half of these were of a purely personal nature - relating to matters like divorce, naturalisations, small debts and private estates. The other half were concerned with some aspect of local enterprise, mainly promoted by joint stock companies eager to exploit the profit of developing turnpikes, dockyards, bridges, railways and gas supplies.

Like these joint stock companies, many town councils up and down the country, and particularly in Scotland, looked upon themselves almost as private enterprise agencies, autonomous of Parliament except with their need to promote private acts to achieve their own ends.² To remain reasonably independent all that they had to do was to avoid bankruptcy, which they could best do by undertaking as little capital improvement as possible; and if threatened by any unpalatable public general legislation, to plead its inapplicability on points of law. Scottish burghs were very good at this, and sometimes with sufficient reason; the terms "abatement" and "nuisance", for example, commonly used in England, had little meaning in Scots Law.

The seriousness of this situation was that Parliament was increasingly unable to exercise effective overall initiative and control in local affairs, and in losing this priority was having to devote an increasing amount of time to a welter of trivialities. There was, therefore, an urgent need to introduce national legislation which coordinated all local improvement. There was also a more urgent need to delegate powers, but an unwillingness to do so, except to a reasonably conscientious, efficient and trustworthy local administration. The means of achieving delegation was increasingly seen to be through the officials of Boards of Supervision, taking their powers from consolidated national legislation and responsible to Parliament through Commissioners.

1 Vardon, T. Index to Local, Personal and Private Acts: 1798-1839. London 1840

2 Between 1798 and 1839 Glasgow alone promoted nearly one hundred private Acts, and Edinburgh, thirty-eight.

The sequence and nature of this transfer clearly reflected the priorities of central government. By and large the maintenance of law and order came first, followed by sanitary reform, and lastly educational and social improvement. In all these, open space provision played a part, but for most purposes a quite incidental part - perhaps as a device to tempt the poor from grog shops, or to improve health by providing increased ventilation around their dwellings, but seldom for recreation, or as an amenity in its own right.

At the beginning of the century, the Tory administrations of Liverpool, Canning, and Wellington, and even the Whig administrations of Grey and Russell, nervous of the republican upheavals in France, were given over at home to a paramount concern for the rule of law. They were concerned instinctively to maintain the status quo, to resist experiment in any dialogue of reform, and to suppress forcibly anything that smacked of sedition or combination.

Not unexpectedly, therefore, as their first concern was with civil order, the first payments made by central government to local authorities were given in 1835 towards the costs of transporting convicted criminals, and in setting up, clothing and paying an effective police force. In 1829 Peel had been successful in establishing from the unlikely and inefficient disunity of the local parish watches of London, the first large and really effective centralised police force in Britain. It served the whole of the Metropolis, was based at Scotland Yard, and was paid for by a new police rate levied on all those paying the poor rate. Unlike the military, it was swiftly capable of meeting threatened disorder before it could build up to dangerous levels. The peelers were of course the beginnings of the modern police force, supported by local rate payers and yet within a centralised control responsible to Parliament through the Police Commissioner and the Home Secretary.



FIGURE 1 :

Part of the Sanitary Plan of Leeds included by Chadwick in his 1842 Report for the Poor Law Commissioners . The Plan shows over sixty textile mills crowding into the central area & also the incidence of cholera and other infectious diseases , (marked by spots). Chadwick sought to show that disease was greatest in the most densely crowded working class housing to the north of Kirkgate . He appears to have ignored the fact that this area included the once fashionable St Peter's Square .

This concern with civil disorder was matched by a growing concern with the maintenance of sanitary order, as manufacturing towns and cities expanded with unparalleled and alarming magnitude, and at a rate far outstripping the inadequate controls and regulation of building and servicing.

In the South, the unbridled growth of Leeds was as typical as any. Even in the 1740's dye works and other noxious industries were setting up along the banks of the Aire and they were followed by a score of mills making ever more insatiable and insistent demands for labour. To meet these, the population more than tripled between 1800 and 1830, causing a shanty town of one-roomed brick back-to-backs to spring up at densities of over seventy dwellings to the acre, and rapidly extending over every available patch and corner of open space.

Into this pandemonium the gas works were thrust in 1822, to be followed eight years later by the railway with its marshalling yards later extending over the very roofs of the houses. By this time most of the wells supplying drinking water had been thoroughly contaminated by cesspits and common privies. They had become ideal vehicles for transmitting cholera; and their position and use, in what little open space remained, a potent source of dispute and litigation. The river itself had long been rendered an open sewer, and of the condition of the fabric of the town, Chadwick gave the following unflattering account in his report to the Poor Law Commissioners in 1842 (Figure 1):

"Of the 586 streets of Leeds, 68 only are paved by the town, that is by the local authorities; the remainder are either paved by owners, or are partly paved, or are totally unpaved, with the surfaces broken in every direction, and ashes and filth of every description accumulated upon many of them.... the streets present all sorts of incongruities....; causeways dangerous on account of steps, cellar windows without protection, here and there posts and rails, and everywhere clothes lines intersecting them, by



FIGURE 2 :

Edinburgh's town boundary as fixed in 1832 by the Parliamentary Boundary Commissioners ; with the main sewerage outfall ponds (marked blue) at Restalrig outside the East boundary, & causing widespread offence & nuisance in its use by local farmers for irrigating their fields ; the main consideration in fixing boundaries was too often convenience of surveying in establishing long straight lines , rather than convenience of town planning.

(Accounts & Papers relating to Parliamentary Representation , Boundary Reports (Scotland) . Session 6 Vol XLII p18) .

which repeated accidents have been occasioned. During the collection of the statistical information many cases of broken legs by these unprotected cellars, and of horsemen dismounted by neglected clotheslines hanging across the streets were recorded."

What he was describing was of course little short of a complete breakdown of local government.

The symptoms of this breakdown were apparent up and down the country. In Scotland, for example, building development in each town was in theory regulated by a Dean of Guild Court, worthy enough in itself, but administering a code of practice widely variable from its neighbours, and with jurisdiction only within the town boundaries. Where these boundaries had changed little over the centuries as in Glasgow at the beginning of the nineteenth century, speculators had little difficulty in exploiting the great housing shortage to best advantage by building what they wanted on land just outside the jurisdiction of the Court. Similarly, the outfalls of town drains and sewers, and the catchments of water supplies, were very often also beyond the town boundaries (Figure 2). To add to this disunity, the latter seldom coincided with the boundaries of Poor Law Unions, so that in times of unemployment, the towns merely discharged unwanted labour as a burden upon outlying parishes in different unions.

After Westminster had reformed its own parliamentary constituency boundaries to take better account of the census information on population distribution, it set about boundary revisions to rationalize local administration. During the second half of the century these proceeded slowly, but often still had to contend with local self-interest and jealousies. Many of the outlying police burghs of Glasgow were not annexed until after the turn of the present century.

1. Chadwick, E. General Report on the Sanitary Condition of the Labouring Population of Great Britain. London 1842 p40

The principle of central government in countering such local disunity had been enunciated by Bentham, when he had advised:

"always to do the same thing in the same way choosing the best, and always to call the same thing by the same name."¹

Chadwick, perhaps the greatest advocate of central government board administration, recognised Bentham's emphasis upon consistency as the secret of efficient bureaucracy²; for him it was no more than an extension of the disciplined scientific method of Linnaeus, and he spent much of his life serving as a member of commissions intent in one way or another, on reforming and centralising the administration of local government.

He had a very low opinion of local councillors, considering them to be largely ignorant, often self-interested and corrupt, and seldom with an adequate grasp of their responsibilities.³ Equally he had no faith in private enterprise every being capable of achieving adequate civic improvement, since, except in privileged areas like Edinburgh's New Town, urban expansion was in the hands of people with only short term interests, and without the means or incentives for raising the large amounts of additional capital needed. The only means of making headway he saw was to provide local councils with exchequer loans and grants to supplement rating income. These would be given for specific improvements, supervised by competent officials, responsible to the commissioners of central government boards, and subject to regular and reliable audit.

1. Chadwick On the Evils of Disunity... op.cit. p2

2. Such consistency was not always a virtue; (see p) as its effect on byelaw housing was to show, and also in the stereotyping of much local authority housing

3. ibid p84

The symptoms of breakdown in local government which such measures were designed to counter were by no means limited to those towns suffering industrial expansion. Even in towns like Edinburgh, civil and sanitary order were precariously balanced. In the Old Town, the preservation of life and limb, certainly required the regulation of Law, but it also needed decent protection from a multitude of nuisances. Usage of the few cramped backland open spaces off the High Street, called for a great deal of neighbourly consideration, and this could seldom be relied upon except at times of epidemic, or during the visit of an important dignitary.¹

Foremost among its great natural charms Edinburgh was celebrated for its smell. Apart from graveyards, such open space as there was, remained habitually uncleansed except by scavengers who supplemented a living by selling dung and fulzie, lovingly stored and tended not only in the causeways and backlands, but also within dwellings. Many were those who needed wormwood to reach their lodgings.

Macpherson reporting in 1840 commented that:

"towards the close of the last century, gaps were observable (through decay) here and there in the line of the Canongate or the High Street, which had not existed for three hundred years; and such places immediately became the receptacle of all the filth and garbage of the neighbourhood."²

If private interests were not prepared to look after such spaces then they were simply neglected or abused. As long therefore as men of wealth and influence resided in the Old Town, middens and other nuisances were kept under tolerable abatement, but when they left to settle in George Square and the New Town, the fall from grace was swift; while in Glasgow and the great Midland manufacturies of the south, there was little grace to fall from.

1. For further detail see Ferguson T. The Dawn of Scottish Social Welfare, Edinburgh 1948
2. Macpherson A. Report of A Committee of the Working Classes of Edinburgh on the Present Overcrowding and Uncomfortable state of their Dwelling Houses, Edinburgh 1840 p.11

In conditions of such disordered emergency, the police, as the instrument of local discipline, were seen also as the only means of controlling sanitary as well as civil order. Dr Cowan, Professor of Medical Jurisprudence and Police, at Glasgow University, urged in 1840 that:

"besides the criminal police of the district, a sanitary police is also requisite, and for this purpose much more extensive powers should be vested in the police than they at present possess. Powers should be given to remove filth of every description daily....and proper conveniences constructed of durable materials and under the charge of the police should be erected in the localities occupied by the working classes."¹

Cowan's opinion was widely held, and it helps to account for the bewildering range of authority given the police under many local police acts during the nineteenth century, from the removal of dung to the control of gunpowder.² It was no accident that Dr Littlejohn, Edinburgh's first medical officer of health, and the first to be appointed in Scotland in 1862, should have had two assistants, both of them police officers; the first to check overcrowding, and the second to supervise admissions to fever hospitals. Society had to be protected from the nuisance of disease spread by the lower orders.

But for all their theoretical power the sanitary improvers and their police could do little in the face of public apathy. It was one thing to legislate through a police act to regulate the cleansing of open space and another for anyone to take notice; loopholes in legislation were frequent, and when for example, the Edinburgh Police Act of 1832 sought to suppress middens, it was found to be only effective in putting down those within dwellings; those outside continued with little check.

1. Cowan, R. The Vital Statistics of Glasgow, 1840

2. In 1803 the sale of dung which was the perquisite of Glasgow's then rudimentary police force was equivalent to one-fifth of the annual cost of keeping the force. See Grant, D. The Thin Blue Line 1973 p.17

Real improvement in sanitation did not come until after mid century, with the consolidation of public health legislation, and the increasingly active supervision of the Local Government Board.¹

Much of what was condemned, even then, including middens, had to await provision of adequate water supplies & piped sewerage.²

Until 1859 Glasgow was still drawing most of its water supply directly from the Clyde, and much of it from below the city. As late as 1871, Paisley, with only one water closet for every 96 inhabitants, was known as a midden town. Even in Edinburgh with its large number of fine town houses, there was only one WC for every six inhabitants.

And having been provided with wcs, the inhabitants still had to be taught to use them. They had also to be persuaded to bring their refuse and filth to be regularly emptied, while the ratepayers had to be satisfied that the costs of such a municipal collection would at least be partially met by the value of the manure collected. Dr Russell had commented of Glasgow's poor in 1890,

"Suppose you had every family in a duly proportioned house tomorrow, if you simply let them alone for six months, you would find them living like pigs again."³

But assuming that you were privileged and not a pig, there was one other useful instrument of discipline. In Scotland, the feudal system of tenure gave private landowners in theory a large measure of control over civil and sanitary order through well regulated planning. Feudal superiority gave them the right to impose any conditions they chose upon development, and these became binding in perpetuity. A superior, for instance, had only to stipulate that his land should be developed with streets of a certain width, with houses of a certain cost conforming to certain space, height and material standards, and that householders were not to engage in any trade on their premises, to be reasonably certain of establishing and maintaining a required level of amenity, serving a specified level of society.⁴

1. The Local Government Board for Scotland set up in 1860

2. Under The General Police Improvement (Scotland) Act of 1862 (25 & 26 Vict cap C1) proprietors could be compelled to introduce water for their tenants and also to provide lavatories; but in Edinburgh it took many years to extend the water mains into the worst housing areas to allow the Act to be implemented

3. Russell, J B. "Sanitation and Social Economics" Proc. Phil Soc. Glasgow XX1 1889-90. p94.

4. For further evidence see Report of the Royal Commission on the Housing of the Industrial Population of Scotland, Rural & Urban. Command 8731 chapt.XX1. HMSO 1917. pp231-2.

In Edinburgh, where much of the land immediately surrounding the town to the north was administered by the Heriot Trust, such a tool was of inestimable value; it underlay the disciplined control exercised over the development of the New Town. To attract house-builders and would-be residents the streets of the New Town were put down by the Town Council, as required by the feuing plans; and in further conditions, the proprietors were required to form and manage over forty local open spaces as private shared subscription gardens. Similar feuing controls were later exercised in the development of the Blacket, Grange, Waverley Park and Dick Lauder estates to the South, although by that time the self-contained villa, set in its own grounds, had largely supplanted the life style based on a terraced house and a shared garden. All these developments hinted at the real value of coordinated residential planning which later became possible without feuing restrictions through the Acts of 1909 and 1947.²

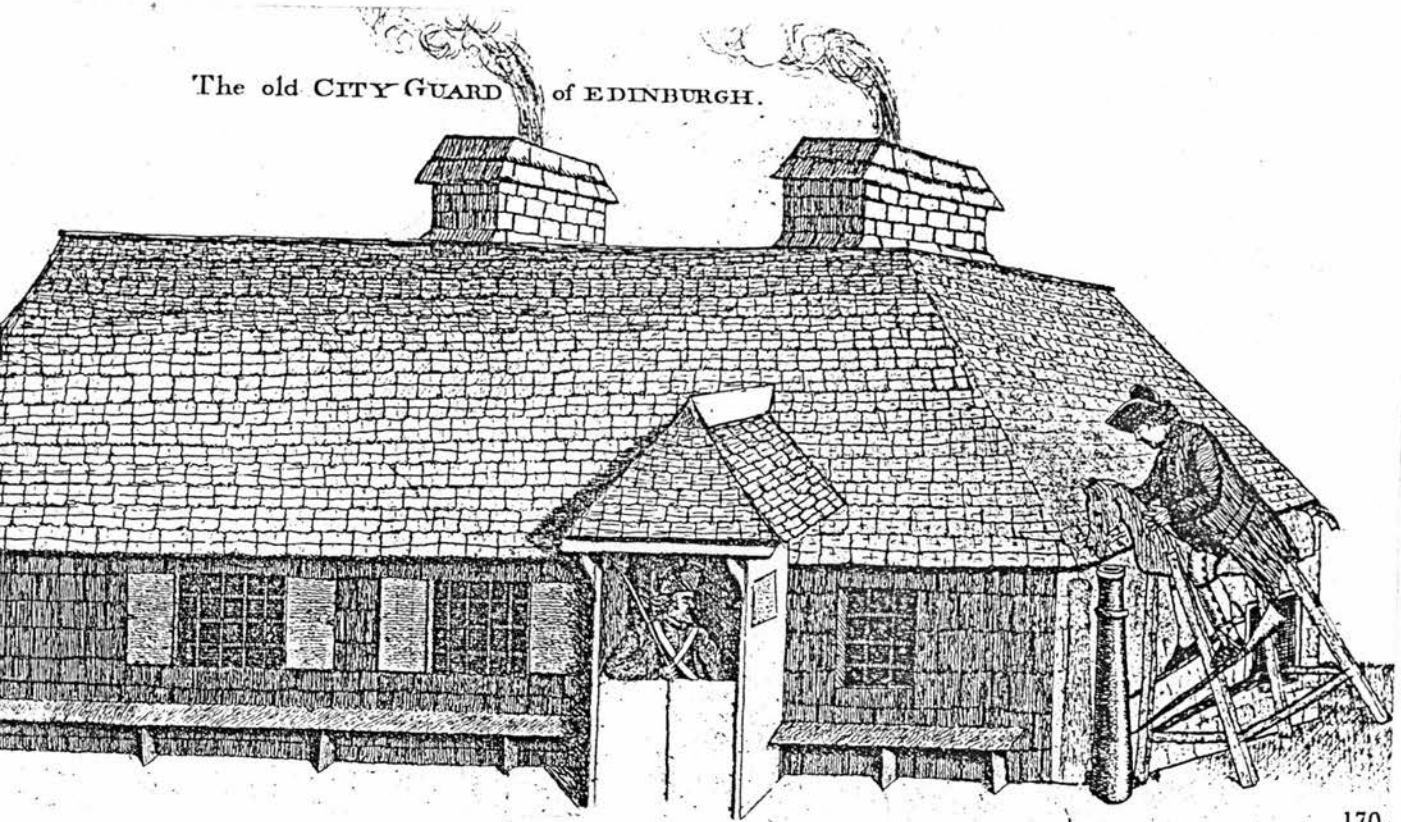
But where restrictions could be avoided, there were always speculators keen to extract the most from any development, and intent only on short term gain. To such men, given a want of working class housing, the least acceptable standards gave the highest return, and any open space was space wasted. During the boom years of Glasgow's growth, before the 1862 Police Improvement Act made one apartment dwellings of less than 900 cubic feet illegal, and began to stipulate adequate amounts of open space at front and rear, it was said that a speculator could recoup the cost of a tenement in as little as three years.¹ Even Edinburgh was to have, in the tenements of Gorgie and Dalry, housing to match the worst of the Gorbals and Hutcheston.

While good planning to high standards was a valuable advantage, the amenity of daily life still greatly depended upon the effectiveness of the agencies of civil and sanitary order. In Scotland, before the

1. Chadwick 1842 Report op cit. Account of a tenement of sixteen rooms and kitchens built for £1200.

2. Acts 9 Edw 7 Cap 44 & 10 & 11 Geo 6 Cap 51 & 53.

The old CITY GUARD of EDINBURGH.



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FIGURE 3 :

The guardians of civil and sanitary order
in Edinburgh's Old Town ; members of
the City Guard and their ramshackle slum
headquarters which straddled the High St.
outside the Tolbooth Gaol.

(engraved by Kay 1786 , republished in
A Series of Original Portraits & Caricatures)
Edinburgh 1872 .

establishment of the local police, criminal prosecution and the preservation of order and cleanliness had been effected by common law through the regulations declared by the City magistrates. The magistrates in Edinburgh were supported by the Town Guard - an unlikely lot, housed in a ramshackle bothy straddling the middle of the High Street (Figure 3). They were first formed by the Town Council from the able-bodied men ordered to defend the city after Flodden,¹ every fourth citizen being expected to take his turn, until a general slackness led to the payment of a permanent force by a special tax.

Most of the Guard were veteran professional soldiers who had seen better days, and their efforts in keeping the peace were at best ineffectual. They were periodically strengthened and reformed after a passing emergency had brought fresh disgrace, and the threat of replacement by the garrisoned militia. After 1750 the Guard consisted usually of only seventy-five men, which Grant described as "quite unequal to the duty to be done."²

So desultory was the Guard's supervision, that the nobility living off the large closes on each side of the High Street had long ensured their own security from public nuisance and disorder, by fitting stout gates across the heads of the closes.³ Similar initiative was taken by them in the management of the New Town open spaces as we have seen, and as late as 1813 the proprietors of George Square resumed the Square's central enclosure for their private use as a garden (Figure 4) & through a committee of management made themselves responsible for the paving, cleansing, lighting and supervision of the whole square. For this they appointed their own officials and paid them by a levy calculated on the width of each house frontage¹.

1. Grant, J. Old & New Edinburgh, Vol. 1, p. 135.

2. ibid, p. 135

3. Chambers, W., City Improvement: address of the Lord Provost to the Architectural Institute of Scotland. Dec 12, 1866, p. 7.

4. Public Law and order in George Square was still of course the responsibility of the Guard, but in 1817 it was disbanded on the formation of a rudimentary local police force, and thereafter all power to enforce law has been conferred by common law.

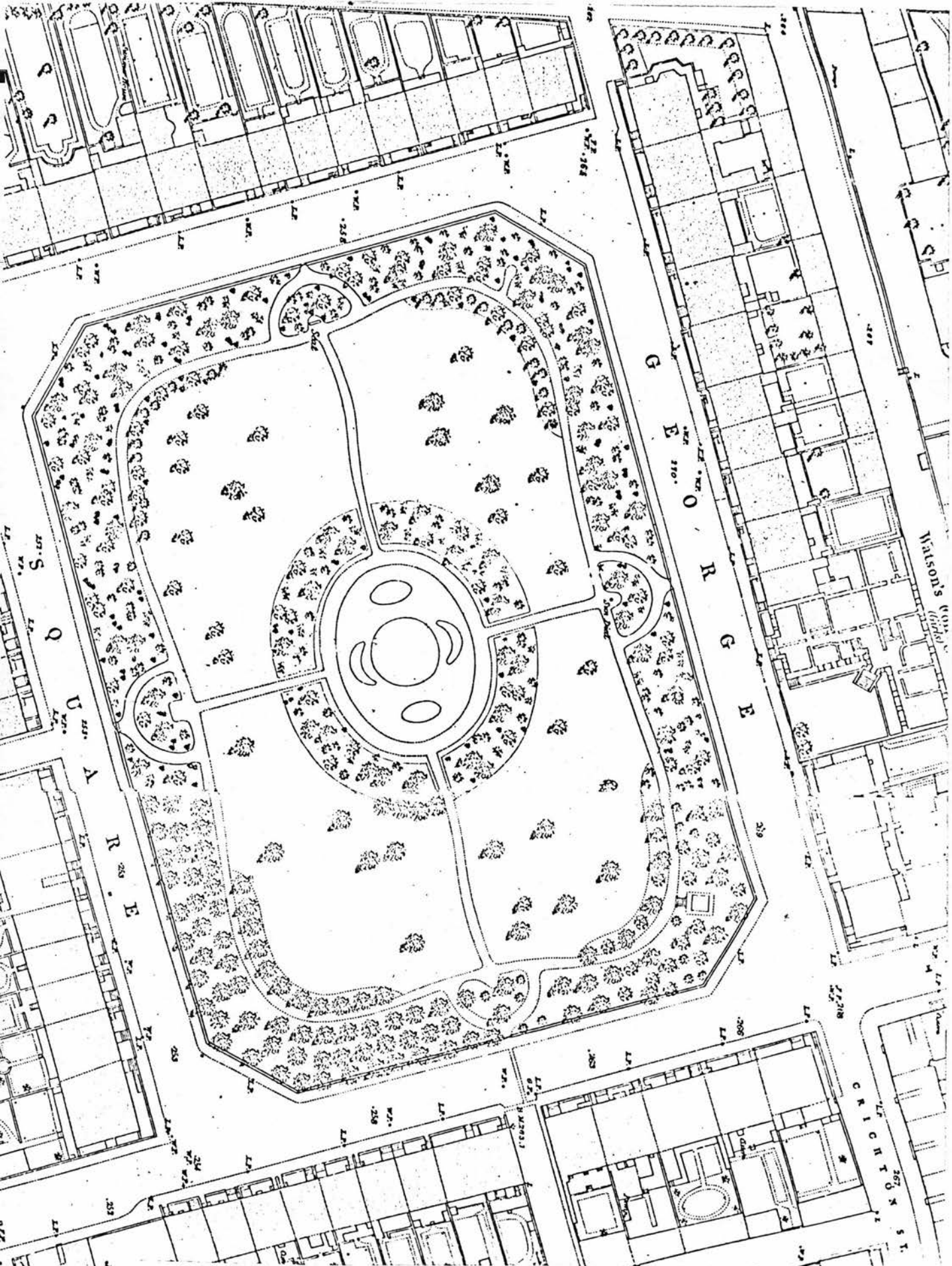


FIGURE 4 :

Plan of George Square Edinburgh, showing the enclosed central garden much as designed by John Hay for the Proprietors in the early 1820's . The design consisted of serpentine gravel walks contained by outer and inner plantations of forest trees , through which views of the surrounding buildings were picturesquely glimpsed . Hay was an acquaintance of J . C . Loudon .

1st O.S. 1860 .

The transference of these private responsibilities back to the local authority as the Town Council extended its control, is clearly set down in the George Square proprietors' minute books¹.

In 1828 the proprietors negotiated their own gas street lighting with a private company, and they paid the Shotts Iron Company to erect thirty-two lamp holders². The following year, the Police Commissioners served a notice on each proprietor ordering him to repair the causeway outside his own house, or face the cost of the work being done for him³. Under this threat, and in the interests of economy, the proprietors came together and raised over £400 by special assessment, to have the whole of the work done by one Contractor and supervised by a paid agent. For all this extra private expense, however, the causeway was still fully accessible to the public and in the years following it was a matter of grievance that the police would do little to stop the passage of hay carts and cattle through the square.⁴

In 1839 the main sewer serving the square blocked, and the sheriff again served an individual summons on each of the sixty two proprietors, and on all those in surrounding districts connected to the sewer, to clear the blockage or face the cost of the work being done for them.⁵ In such an emergency it today seems absurd that so cumbersome and precarious a procedure was necessary; the sheriff must have been only too well aware of the likely need to take tedious and wasteful legal proceedings against laggard and unwilling proprietors. To add to his difficulties there were no records showing where the sewer was, and when work began, further blockages were discovered. After this clumsy episode the money needed by the local authority to look after the sewer was added by the police assessor to each householder's future annual general assessment; and a proper plan of the sewer was made.

1. Sederunt Books of The George Square Proprietors, vols. 1-3 in possession of University of Edinburgh.

2. ibid., vol. 1, p. 45.

3. ibid., pp. 46-66.

4. ibid., vol. 2, p. 11.

5. ibid., p. 117.

A similar transfer of responsibility took place with roads and lighting. In 1846 the City of Edinburgh Paving Board was set up.¹ The City magistrates and the Town Council were its commissioners, and they were charged with the lighting, maintaining and cleansing of all roads, and of levying a rate for the purpose. A majority of the George Square proprietors considered such powers to be an unwarranted intrusion on their freedom of action, and they voted to continue to look after the streets themselves. This they did for a number of years, but it eventually became clear to them that the commissioners exercised virtually complete control by being able to stipulate the required standards of maintenance, and as the public in any case could not be excluded, it was not long before the proprietors rescinded their previous decision and handed over the roads.²

By 1860, therefore, the servicing and management of the environs of George Square had effectively passed from the proprietors to the local authority, and through it to the commissioners of boards responsible to central government. Apart from looking after the central pleasure garden, the role of the Committee of Management was reduced to little more than that of a local amenity association, in making sure that the town council kept up to its mark. While the council lifted and relaid the causeway, resumed control of the town water supply from a private company,³ and improved the street lighting, the Committee of Management waged war against "a large Necessary"⁴ put up by the police commissioners in a corner close to the square and overlooked by some of the houses; they also took up against the smoke of the Royal Infirmary's boiler, and at an Archimedian threat to discharge the hospital's sewage in the direction of the sewer serving the square.⁵

1. *ibid.*, vol. 2, p. 11 (Sec 36 of 9 & 10 Vict. cap 365, later amended by Sec. 15 of 17 & 18 Vict. cap 134.)

2. *ibid.*, p. 70, 7 April 1859.

3. Since 1819 run by the Edinburgh Water Company, a joint stock company.

4. An exaggerated claim; it later turned out to be only a four seater.

5. Sederunt Books, *ibid.*, vol. 2, pp. 30, 73, 80, 342.

The only serious threat to this balance of public and private interests came in the Finance Bill of 1909,¹ which proposed a tax on all parks, gardens and open spaces to which the Inland Revenue Commissioners considered the public not to have sufficient benefit of access. The square garden had of course been railed off for the exclusive use of proprietors and was thus liable to tax. After strenuous representations, among them a joint memorandum from the most notable of Edinburgh's subscription gardens, including George Square,² the clause relating to the tax was dropped. Local authorities were merely given permission to adopt any such spaces offered to them.

But whereas the George Square proprietors had relinquished their other controls, they continued to manage the central garden and have done so to this day, as have the proprietors of most of Edinburgh's other forty-odd subscription gardens. It may, therefore, be argued that this process of transfer from private to public responsibility has baulked on the matter of open space and is still incomplete, although the local authority has long since had powers to acquire the gardens if it is so desired. The question of public takeover has remained an issue of unresolved and perennial interest, and the present case for not transferring the gardens to the Town Council has rested very much on the evident inability of the Council to provide a sufficiently high level of management.

If George Square, this select and comparatively well-favoured part of Edinburgh, during the greater part of the nineteenth century, was subject to such precarious controls, it may well be imagined how much less effective these were in the crowded disorderly and poorer parts of Victorian towns and cities. In these deprived areas, where a measure of local open space was most urgently desirable, there was little incentive to provide it until adequate servicing could be reasonably assured.

1. Later the Finance Act (1909-10), 10 Ed 7, c 8 see section 17.

2. A joint memorial to the Chancellor of the Exchequer from the Feuars of George Square, Queen St., Moray, Regent, Royal and Carlton Terrace Gardens.

Since this required at the very least, a well-organised police force, an ample water supply, efficient drains, a regular and reliable scavenging service and, in addition, tolerant if not beneficent rate payers, it was seldom to be met with on any scale until the advent of the public housing programme in the present century. And even then, the level of management frequently fell well short of the necessary co-ordination and skill which Chadwick had looked for as a measure of the maturity of local authority administration.

CHAPTER TWO.

OUTDOOR VENTILATION.

This chapter introduces the first theme of the study - the justification for providing local open space in cities. It shows how urban open space was for long looked upon as a sanitary improvement rather than as an amenity or source of recreation. The chapter is presented in five sections. The first examines the assumed causal link between fresh air and good health; how this was reflected in the social order, in standards of ventilation and cleanliness, and how it was interpreted in practical terms in open space improvements of the kind recommended by Chadwick's correspondent, Captain Vetch. The second explores, among other examples, the application of these ideas on ventilation to the sanitary clearances of Edinburgh's Old Town, carried out by Provost William Chambers. The third and fourth sections review further aspects of the medical case in favour of open space, while the concluding section shows how medical science finally demonstrated the value of regular open air exercise, and lent its weight to the ideals of the garden city movement and bodies like the National Playing Fields Association through which guiding standards for open space provision were finally established.

HEALTH, VENTILATION & OPEN SPACE.

The notion that ventilation was intimately related to health, was firmly founded on certain analogies, long based on commonsense.

Tissot, the eminent French physician, gives a charming account of these in his Essay on The Disorders of People of Fashion¹ in 1770.

He observes that:

"Wind is one of Nature's grand agents, the impressions of which are necessary to all organised bodies. Motionless air is to animals and plants the same as stagnant waters to fishes formed to exist in rivers. Thus in being anxious to preserve ourselves from wind, we do ourselves a real injury".

The wealthy town dweller has some advantage in having elegant and airy apartments, but has, nevertheless, to breathe town air "far inferior" to the country air enjoyed by the rural peasant, and which, together with sunshine, gives

"advantages demonstrable by the daily observations of the effects they produce upon animals and plants".

In Tissot's time, and for more than a century following, disease was considered to be spread either by contagion, or by infection of the air. The sense of smell was thought to give:

"certain warning of the presence of malaria or gases noxious to health".²

and it was regarded as significant that food stored in stuffy close spaces turned bad far more quickly than food stored in well-ventilated spaces. It was not, therefore, surprising that housing

1. Tissot S. An Essay on the Disorders of People of Fashion and a Treatise on the Diseases incident to literary and Sedentary Persons, Paris 1770 republished Edinburgh 1772, p.18.

2. Chadwick E. 1842 Report op.cit. p.232.
See also Larkin C "On Contagion", The London Medical & Physical Journal, Vol. L111 No.4 April 1825 p.267, and many other articles on disease caused by bad air - in era before bacterial discoveries laid foundation of modern medicine.

improvement during the nineteenth century was increasingly influenced by a growing conviction in the wholesome goodness of draught and through ventilation. A sufficiency of space both within and without dwellings was seen by the sanitarian reformers as essential to good health and ventilation; and the pursuit of fresh air became the most important single influence in the promotion of local open space in housing, and an influence which was to last well into the present century.

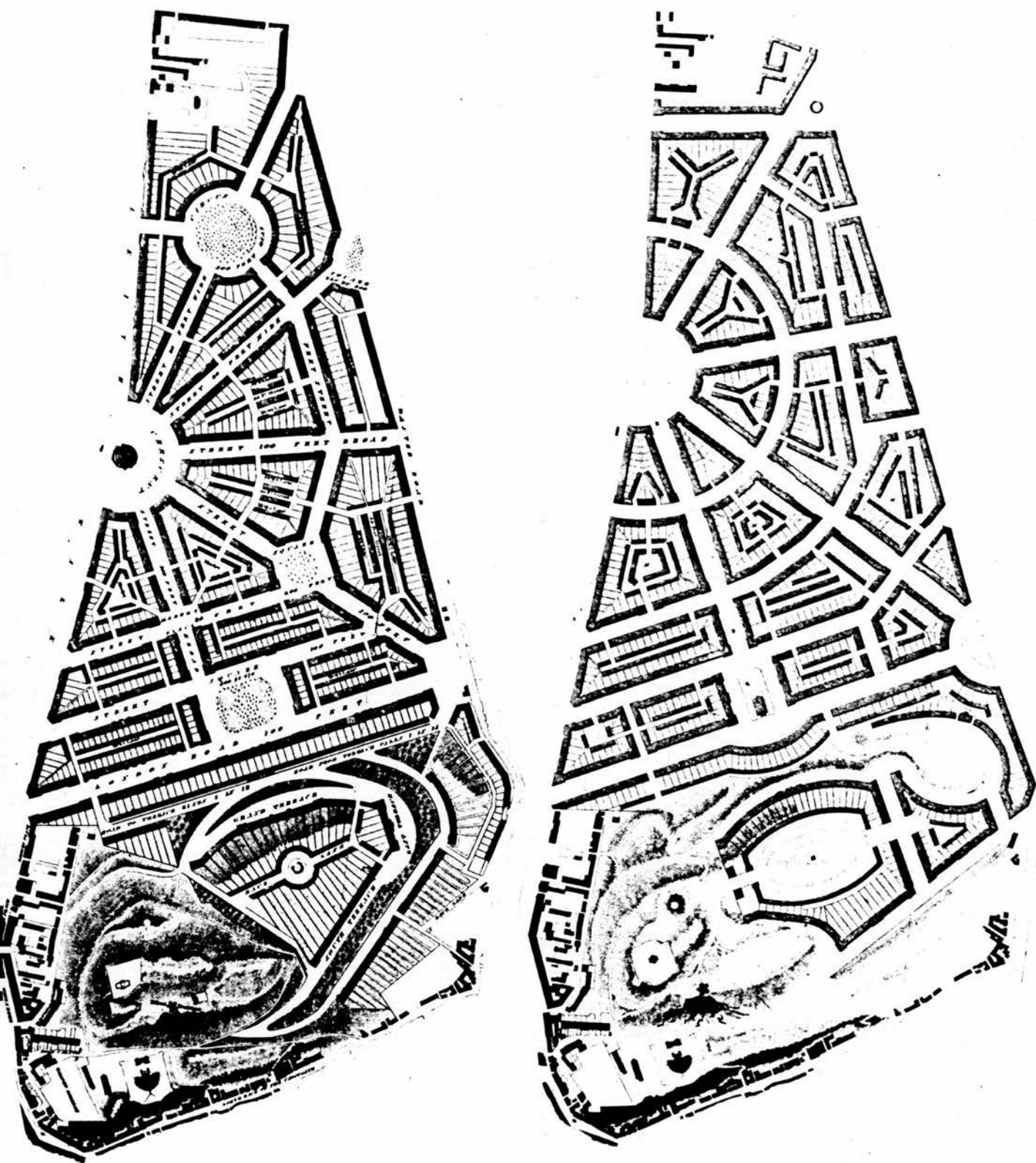


FIGURE 5:

Two of the plans submitted in competition for Edinburgh's Third New Town between Calton Hill and Leith Walk ; (left) by Crichton and (right) by the painter Alexander Nasymth ; both stress the emphasis placed in Georgian planning upon axial regularity and wide well-ventilated streets terminating in vistas which close on circuses , crescents and squares .
(plans engraved by Kirkwood .)

A glance at Rocques' Map of London (1746),² shows how such convictions had influenced the beginnings of the great Georgian estates well before these times. Their large regular well-ventilated squares represented an isolating and ordering of polite society, both physically and socially, from the surrounding hugger mugger. The place of ventilation in such planning was just as strong, a century later, and it may be judged from entrants remarks in the abortive competition of 1812 for laying out a third new town in Edinburgh, between Leith Walk and the Eastern Road, (Figure 5).

In their reports, there is a frequent recurrence of phrases such as :

"the need for a free circulation of air".

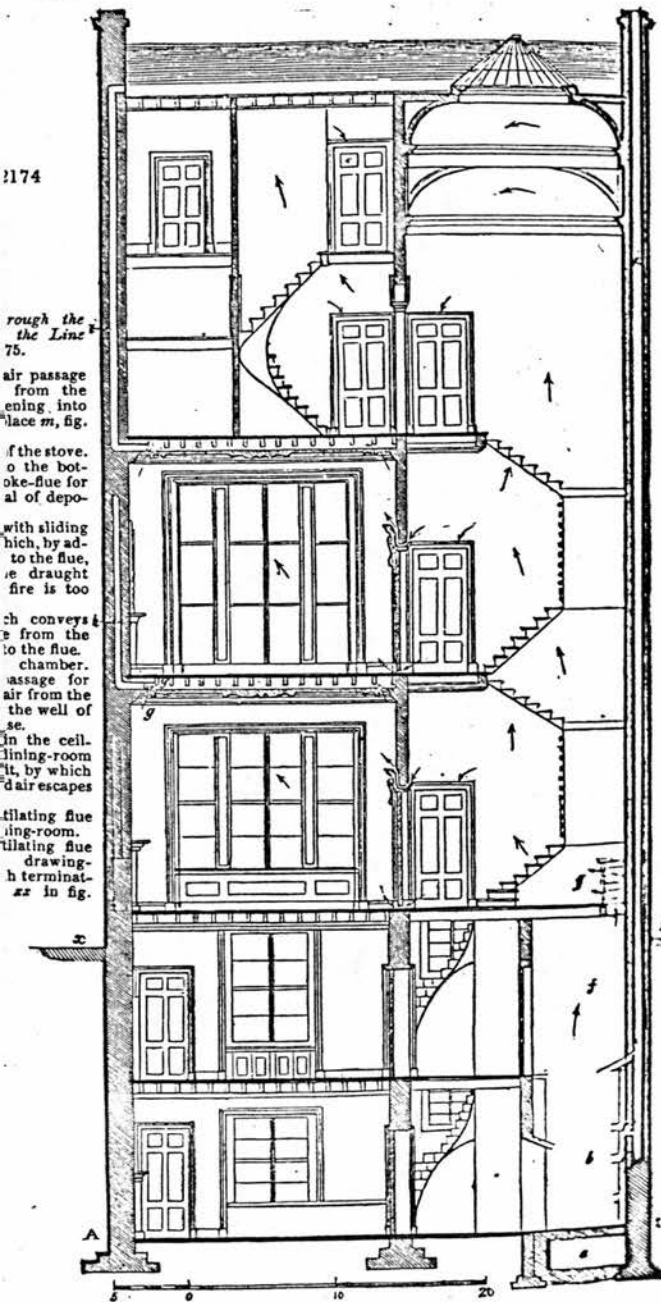
and to a striving :

"to unite healthiness, convenience, safety
beauty and magnificence",

with the greatest possible regularity of plan.¹ The surviving competition entries have a close family similarity based upon these long established practices. The best and the widest streets were reserved for the houses of the highest social orders, and were linked to squares, circuses, crescents and octagons, not simply for effect, although this was important, but because such arrangements allowed a generous circulation of air. These were the practices of an enlightened elite for their own self-protection. In matters of ventilation the extremes of such self-protection were

1. Entry of the Plans for the New Buildings 1812, Register House, Edinburgh, AD 113; 332; pp 1 - 272.

2. Figure 15.



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Plan of the Kitchen Floor,
showing only half the thickness
of each gable.

- a. Sunk area.
- b b b. Cellars under the foot-pavement of the street in front. Two open into the area, the others communicate with the interior.
- c, d. Outer passages.
- dd. Trap for shooting down coals for the service of the furnace.
- e. Servants' hall, 19 feet by 14 feet.
- f, g, A. Bed-places and press.
- A. Press.
- A. Flue of furnace.
- m. Situation of heating apparatus.
- n. Inner lobby.
- p, p, p. Presses.
- r. Kitchen, 20 feet by 17 feet.
- s, s. Open grate and oven.
- u. Steaming apparatus and hot closet.
- v. Ventilating flue from kitchen ceiling.
- w. Smoke flue from laundry below the kitchen.
- x. Projection containing gas cooking stoves.
- y. Scullery, &c.
- z. Staircase downwards to ground floor, and upwards to dining-room floor.
- 1. Housekeeper's room.
- 2. Bed alcove.
- 3. Press in passage.

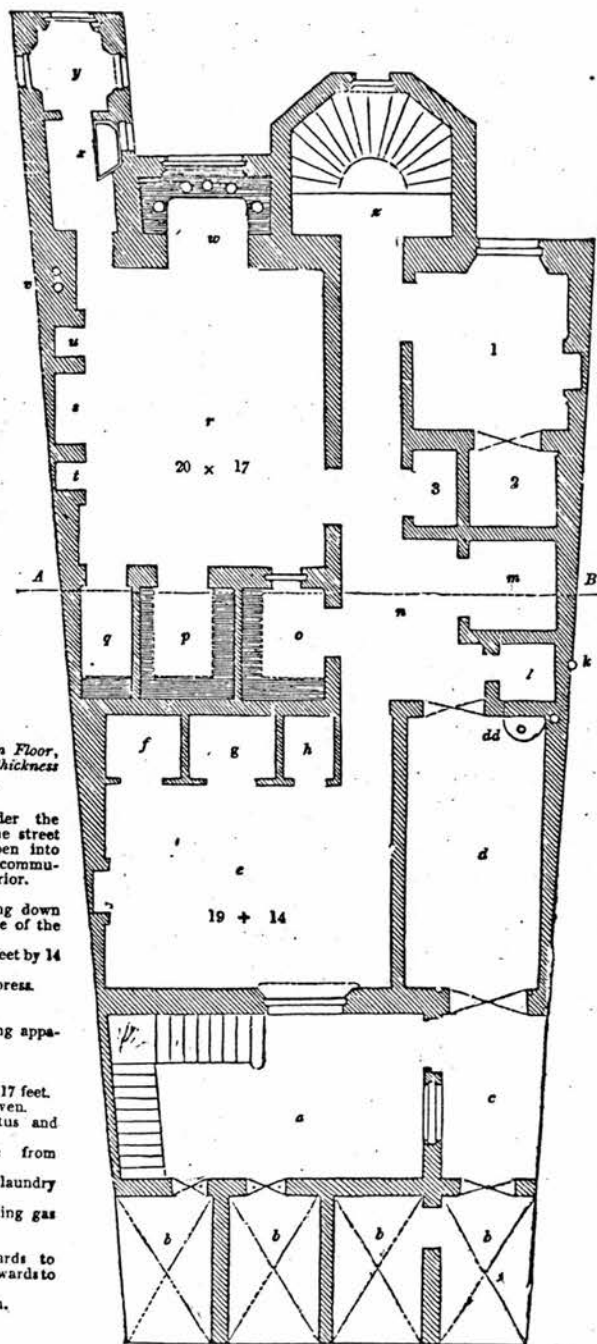


FIGURE 6 :

House of Sir John Robison, Randolph Crescent, Edinburgh, showing the extremes to which the wealthy took ventilation in order to protect their health. Gaps in the joinery and ceilings allowed vitiated air to escape into ventilating flues. (Loudon J. C. Cottage, Farm & Villa Architecture, p1197.)

demonstrated by houses such as that of Sir John Robison in Randolph Crescent (Figure 6), while externally they turned their backs upon the disorderly accretions of the lower ranks each day extending through the inadequate control of public authority. As this disorder became chaos in cholera and typhus, Chadwick and his followers were left in less and less doubt as to the connection between poor ventilation and disease. The hasty burials of cholera victims raised, with their ill-vented stench, the threat of worse to come, and Parliament was persuaded in 1848 to ban all further city burials, and to close any graveyard within one hundred yards of dwellings. The dead henceforth took to the open country and did so, as we shall see, more than a generation before the living.

The contrast in the living conditions of the privileged, and the poor, is perhaps best summed up in Elwin's account of Bath, quoted by Chadwick in his evidence to the Poor Law Commissioners.¹ Elwin observed from mortality statistics that the average age of mechanics and labourers dying in Bath in 1840 was only 25, while tradesmen and their families lived on average to 37, and gentlemen and professional people lived to 55. He concluded that :

"the difference in the ages of these several classes presents ... a tolerably exact scale of the differences of their abodes. The large houses, the broad streets, looking almost invariably on one side or the other upon parks or gardens or open country, the spacious squares, the crescents built upon the brows of the hills without a single obstruction to the pure air of heaven, give the gentry of Bath that superiority over other grades and other cities which their longevity indicates".

1. Chadwick op cit pp 168 - 170.



FIGURE 7 :

The Bath of Elwin, the crowded dwellings of the poor to the south of Queen Square & within the area of the old walled city ; beyond them to the north the spacious airy dwellings of the wealthy , Queen Square & King's Circus (1728-1760) with the Royal Crescent & Brock St , (1760-1790) .

25" O.S. 1861.

Elwin then considered the tradesmen's housing, which although inferior to that of the gentry was nevertheless

"better than that of their own station in other places. The streets they chiefly inhabit, though with many exceptions, are wide and swept by free currents of air, with houses large and well-ventilated".

And finally he considered the housing of the poor which he found in a wretched state

"chiefly located in low districts at the bottom of the valley, and narrow alleys and confined courts.... The deaths from fever and contagious diseases I found to be almost exclusively confined to the worst parts of the town . . (where) all the scum of Bath - its low prostitutes, its thieves, its beggars - are piled up and to aggravate the mischief . . . refuse is commonly thrown under the staircase and water (is) more scarce than in any quarter of the town". (Figure 7).

The implications of such conditions in towns were clear enough to those who believed in the paramount importance of ventilation as essential to health. Captain Vetch of the Royal Engineers certainly believed it, and he submitted a memorandum to Chadwick listing the practical means of improvement.¹ Vetch proposed that:

"the noxious ingredients which must exist more or less in the atmospheres of all large towns may be dissipated by currents of air, or diluted by access to large open spaces.".

He recommended the conversion of blind alleys into thoroughfares, the continuation of leading streets through impeding blocks of houses,

1. ibid Appendix 5 p.382

TOWN OF BIRMINGHAM,

To illustrate the mode proposed for constructing the future increments of an irregular Town, upon principles of general convenience and utility.

PPP. Normal Polygon of Construction

a. Mill Pond.

b.c. Line of New Cut proposed for River Rea.



FIGURE 8 :

Vetch's proposal for disciplining the outward growth of cities by establishing baselines to which all development would conform . Compare with Figure 29 showing Glasgow's extension following 1866 .

(Chadwick E. 1842 Report op cit p385)

and the opening of wide straight streets through the meanest and most crowded parts of cities, supplemented by the creation of open squares, public walks and gardens to serve as reservoirs of pure air.

In addition to thorough ventilation, he recommended complete close pipe drainage and sewerage, and ample water supply, and a ready and convenient communication between the various parts of a town. Finally, he suggested that the outward growth of towns like Leeds should be disciplined by surrounding them with a polygonal ring road, the sides of which would serve as baselines for future extensions, (Figure 8). Vetch's advice was to serve as a remarkably prescient statement of what increasingly came to be regarded as good town planning practice in nineteenth century Britain; and it summarised very succinctly the supposed sanitary value attaching to the provision of open space.

OPEN SPACE & VENTILATION IMPROVEMENTS.

One of the fullest applications of Vetch's principles was in the improvements carried out in the Old Town of Edinburgh by Lord Provost William Chambers. Like Vetch, Chambers had contributed to Chadwick's 1842 report, and in it he had described Edinburgh as:

"one of the most uncleanly and badly ventilated (cities) in this or any adjacent country".¹

Over the following quarter of a century he was to become more and more impatient at the lack of progress in carrying out improvements. During this time the better off and more ambitious of the working class were moving out of the Old Town into new suburban tenements at Gorgie, Dalry and Leith. Chambers saw their place being taken by:

"vagrants and semipauperised orders rendering . . . the Old Town closes a convenient receptacle for those who in due time furnish occupation to inspectors of the poor, the police, and the criminal tribunals".

Even in 1840 he had described them as :

"human beings living in a state of wretchedness from which no effort of the pulpit, the press, or the schoolmaster (could) raise them the class of whom I speak are too deeply sunk in physical distress, and far too obtuse in their moral perceptions, to derive advantage from any such means of melioration".²

1. Chambers W. The Sanitary Condition of the Old Town of Edinburgh
Edinburgh 1840; p.1.

2. ibid : p.3.

Public conscience to act was at last aroused with the help of Edinburgh's first Medical Officer of Health, Dr. Littlejohn.¹ In his Report on the Sanitary Condition of Edinburgh (1865) Littlejohn laid great stress on the need to improve the ventilation of the overcrowded closes and wynds off the High Street, and he suggested that this be done by acquiring the necessary property and driving a new street diagonally through the worst area to act as a kind of ventilation shaft just as recommended by Vetch.²

Soon after the publication of Littlejohn's report, Chambers became Lord Provost, and he at once set about securing special legislation to give the Corporation the necessary powers of improvement. The Act was passed in June 1867,³ and so sweeping were the changes it sanctioned that, in safeguard to the ratepayers, every member of the Town Council was appointed as an improvement trustee.

Littlejohn had proposed only a single street improvement between St. Mary's Wynd and Niddry Street, but Chambers, after a preliminary sketch (Figure 9), took the idea of the diagonal ventilation shaft, and with the help of architects Cousin and Lessels, applied it to the opening up of a further two blocks, and in addition

1. Littlejohn had been appointed in 1862, and was certainly in touch with Chadwick at this time; both he and Chadwick, together with Florence Nightingale had contributed papers to the 1863 meeting in Edinburgh of the National Association for the Promotion of Social Science.
2. Dr. Cowan of Glasgow made a similar proposal in a letter to the Scotsman, 19 October 1864, which may possibly have influenced Littlejohn.
3. 30 & 31 Vict. II 619.

The blocks of building are *in situ* *new*.
 The blocks marked A A next North College St are reserved for New
 College Buildings if required



FIGURE 10 :
 Revised plan of proposed improvements to the Old Town
 of Edinburgh , by Cousin & Lessels , based on those of
 Lord Provost Chambers.
 1866.

made clearance proposals to create new open spaces in a further ten areas, (Figure 10). The total cost was estimated at upwards of half a million pounds and it involved the building of seven new streets.¹

Cousin and Lessels' proposals² gave detailed practicality to the ideas of Chambers, and they extended the boundaries of improvement to include the crowded southside tenement area between Bristo Street and Simon Square. They recommended that the programme should begin with the formation of Jeffrey St.³ where the population was least dense, to allow the erection of new and salubrious working men's tenements on unbuilt ground before transferring dispossessed families from elsewhere.

In the Grassmarket and West Port, clearances of back-lands were to provide

"good open areas for drying clothes, air and light".

From Bristo Street to Nicholson Street new access and through ventilation was to be given by removing the central compartment of the building separating Alison & Nicholson Squares⁴, while a further eastward extension of this new thoroughfare towards

1. Later named Blackfriars St. St. Marys St, Jeffrey Street, Chambers St, Lady Lawson St. and Howden St.
2. Cousin & Lessels "Plan of Sanitary Improvements for the city of Edinburgh", Minutes of The Lord Provost's Committee, 17 August 1866.
3. In 1875 The Cockburn Association persuaded the Improvement Commissioners to drop their proposals for developing the open north side of Jeffrey St, in order to preserve the fine views towards Carlton Hill from street level.
4. To form also an improved access to George Square, see George Square Proprietor Sederunt Book No. 2, p. 307.

Queens Park was proposed through the slum tenements between Simon Square and East Cross Causewayside.

And lastly, a new access to the Queen's Park was to be formed through Carnegie Street at Heriot Mount, to make unnecessary the long and circuitous journey needed to get to and from the park, which in the past had effectively discouraged:

"the inhabitants from the enjoyment of a great boon, although lying at their very doors".

Having made such sweeping improvement proposals, Cousin and Lessels commented almost apologetically that they could have been far more drastic, but:

"constantly kept in view... the preservation as far as possible of the peculiarly picturesque character of this ancient city".¹

This ambitious programme was to carry forward well into the 1880's, and was to be followed by a further more modest improvement scheme. It was especially important in being the first time that a Scottish local authority had acted decisively and on a large scale to carry out sanitary improvement. During the work, some 2,721 dwellings were demolished and the two penny rate originally raised to cover costs was doubled to provide £550,000 for twenty years.²

1. Cousin & Lessels. op.cit p.23

2. Cousin & Lessels' first estimate had been for a total of £306,995, but of this £111,071 was to be recouped in new building sites. The number of families displaced was to have been 3,257.

Similar improvements in the Old Town of Edinburgh had certainly been going on over a very much longer time. Earlier clearances shortly after the Reformation were often drastic but very local, as the nobility and the wealthy sought larger town houses along the frontage and backlands of the High Street. Additions such as the North Bridge also made their contribution to open space and improved ventilation, but again these were incidental and local.

More far reaching clearances had taken place in the Grassmarket under the 1829 Improvement Commission, and in the Abbeyhill and north back of the Canongate between 1830 and 1841, by the Railway Access Company - but these were single minded ventures which served only to exacerbate the housing shortage and to increase overcrowding in the rest of the Old Town.¹ The achievement of Lord Provost Chambers was in persuading the Town Council and the rate-payers to take a far more comprehensive view of improvement than ever before, and in combining a necessary boldness with both a deep understanding of the social problems involved and an appreciation of the historic fabric of the Old Town. Like his contemporaries, he may have been mistaken in attaching so much importance to ventilation, but the open space improvements he carried out have proved of great value to the amenity if not to the health of Edinburgh. The Georgian New Town has so often been cited as the great planning achievement of Edinburgh that Chamber's work has invariably been overlooked. He may fairly claim to be remembered as the George Drummond of the Old Town.

1. Report of a Committee of the Working Classes of Edinburgh of the Present Overcrowded State of their Dwelling Houses. Edinburgh 1860 p. 12

Edinburgh was by no means the first or the only town to employ the improvement principles of Vetch. In London the Metropolitan Board of Works, set up in 1854, carried through some notable ventilation shaft projects. The largest of these was the formation of Victoria Street and Shaftesbury Avenue, cut through densely crowded Soho and St. Giles, (Figures 11a & b).¹ Similar drastic shaft clearances were achieved by the railway companies although hardly in the name of open space. One of the most dramatic of these was the extension of the railway over the Clyde through two blocks of the worst housing in Glasgow, (Figure 12a & b); while, in London, Dyos estimated that between 1853 and 1901 the railways displaced at least 76,000 people.²

Few of these received compensation or alternative accommodation, although the railway companies could on occasion be persuaded to put up money for open space improvements. Princes Street Gardens was additionally embellished at their cost,³ in exchange for right of way, and in Glasgow St Vincent Loch for boating and skating, (Figure 53), appears to have been formed to compensate adjoining proprietors for the intrusion of the dock company railway along the Clyde.⁴

1. Also a similar application throughout Europe, for example in the new thoroughfares cut through the worst quarters of Naples after the terrible cholera epidemic of 1884; a process described as sventramento.

2. Dyos H J, *ibid.* p. 61.

3. Robertson, D. The Princes St Proprietors. Edinburgh 1935.

4. The Govan Dean of Guild records relating to this development have unfortunately been destroyed by fire.

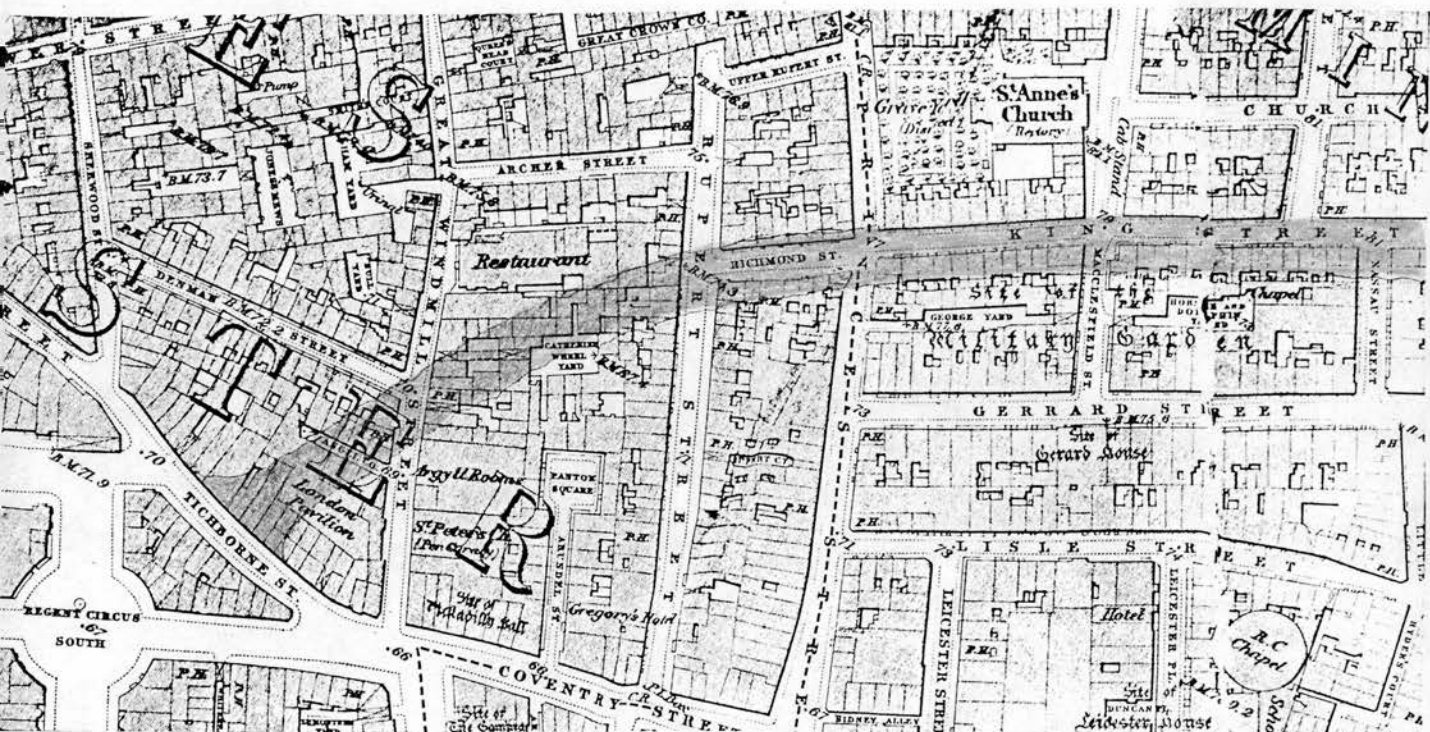


FIGURE 11 :
The crowded backstreets of London's Soho before and
after their ventilation by Shaftesbury Avenue .
25" O.S. 1884 & 1951 .

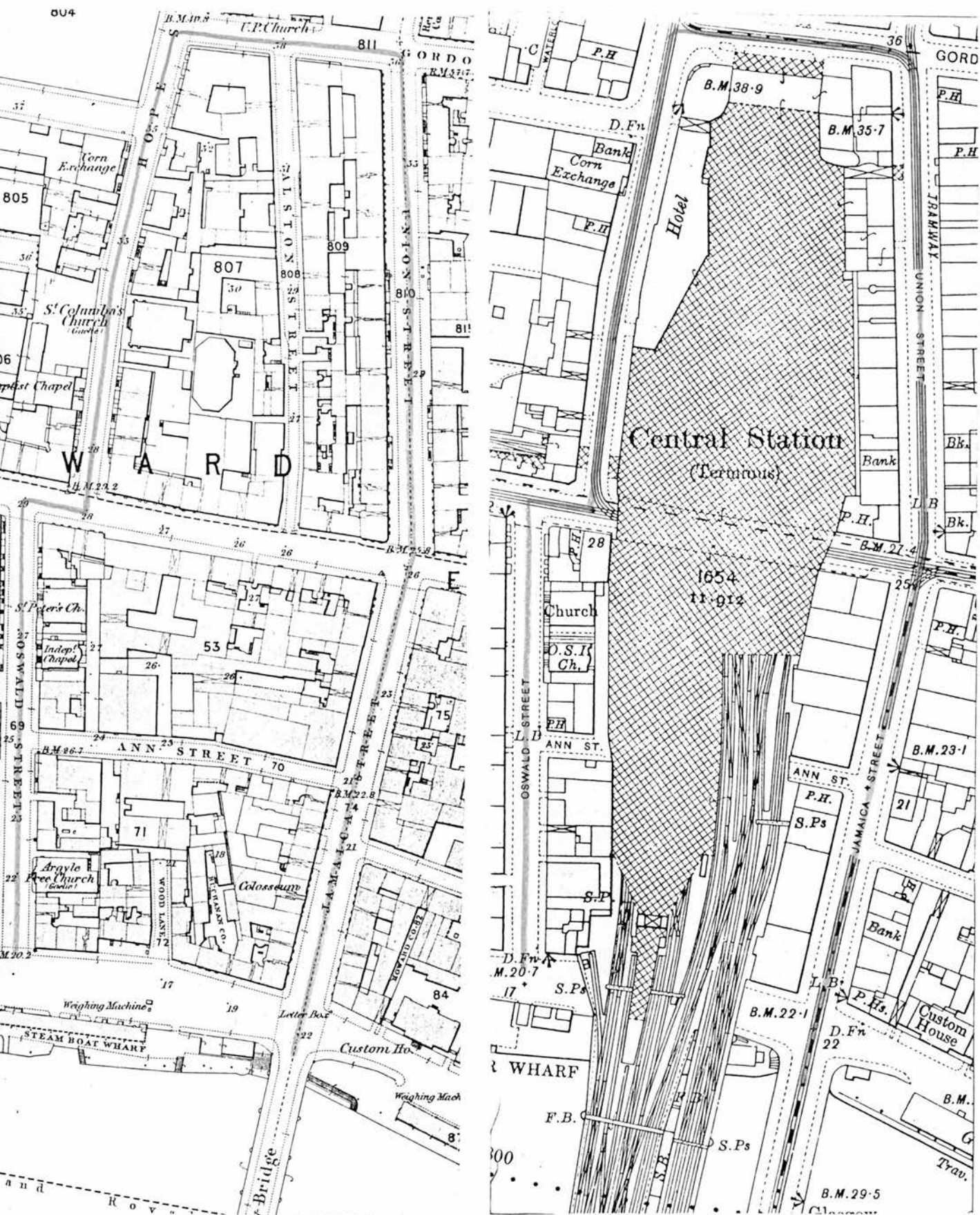


FIGURE 12 :
Central Station Glasgow , after extension of the railway over
the Clyde . The station displaced some of the city's worst
housing reputedly of densities up to 1000 to the acre.
25" O.S. 1861 & 1896.



FIGURE 12c:
 Typical use of street improvements to
 cut ventilation shafts through some of
 Glasgow's worst housing, under the 1866
 Improvement Act.
 (Glasgow City Archives)

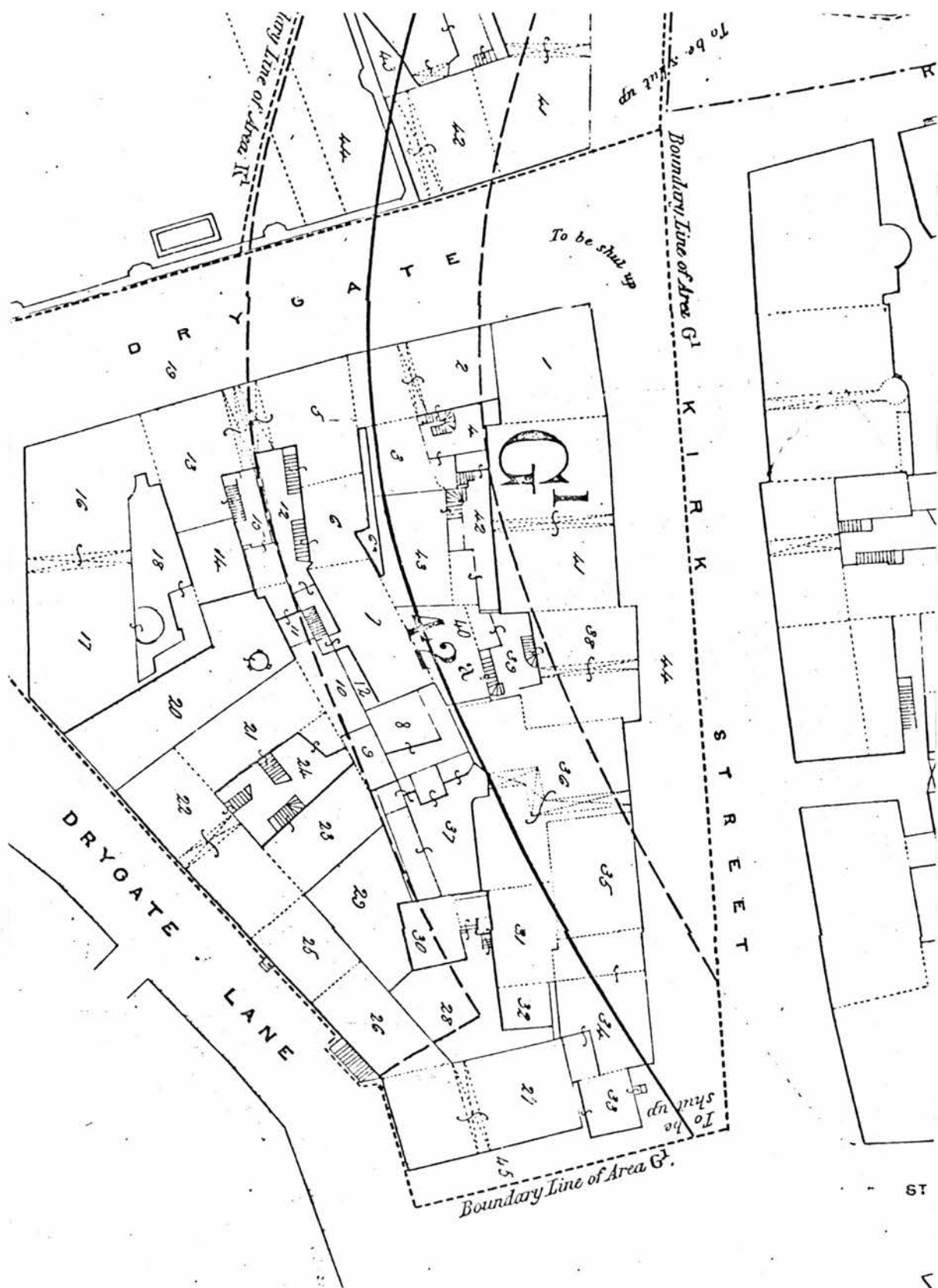
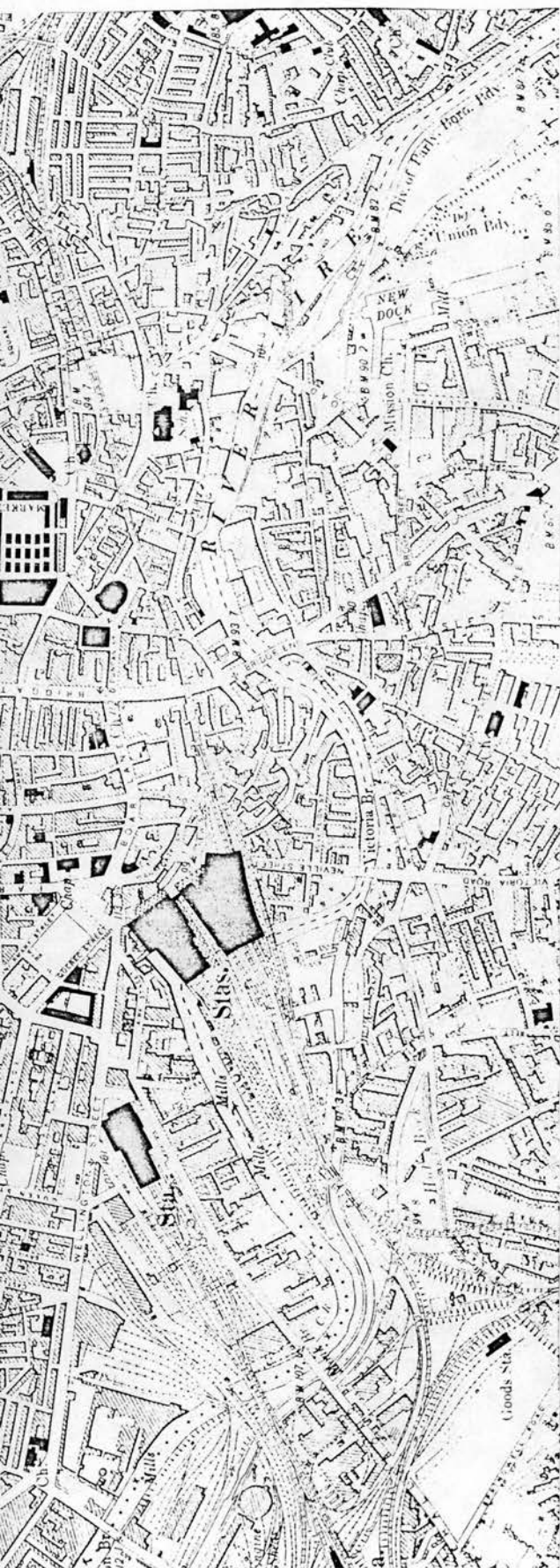
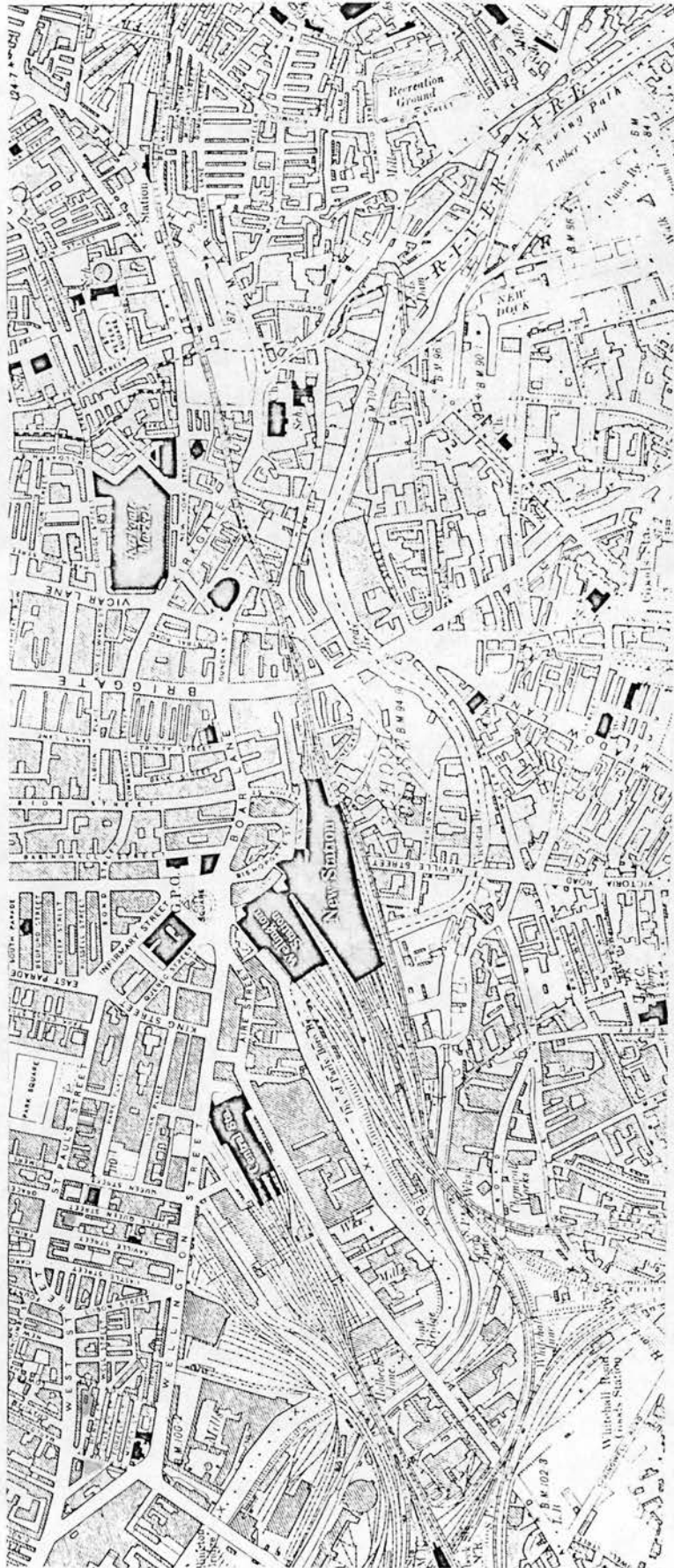


FIGURE 12d:
 Typical use of street improvements to
 cut ventilation shafts through some of
 Glasgow's worst housing, under the 1866
 Improvement Act.
 (Glasgow City Archives)



1894



1909

FIGURE 13 :

Comparison of the central area of Leeds in 1894 & 1909 showing the negligible impact of a programme of selective clearance at Camp Field south of the river, and in Sweet St , East St , the Bank and West St , to remove unfit housing , create through lanes road widening and small open spaces.

1:10560 O.S. 1894 & 1909.

Other open space improvements in the name of ventilation were less sweeping. Leeds, for example, under part 2 of the 1890 Housing Act undertook a limited programme of "opening up" in the worst of its back-to-back housing. Through lanes were created and some roads were widened. Small open spaces were also formed; these served as reservoirs as recommended by Vetch, and some were made into playgrounds with the help of charitable trusts. Altogether some four hundred houses were cleared, involving a mere three acres.¹ The paltry effect of these improvements may be judged by comparing the Ordnance Survey Sheets of the central area for 1894 and 1909, (Figures 13a & b). There remained therefore, as in so many of our towns and cities a permanent deficit of open space.

1. Ravetz, A. Model Estate 1974 p.19

THE LUNGS OF THE BODY CORPORATE

One of the sturdy but largely mythical virtues attributed to green open spaces was that they acted as lungs purifying the air of towns and cities. There can be no doubt that much of the urban open space provided in Britain during the nineteenth century, found its main justification in this argument. The lung metaphor recurs again and again.

Dr Begg, for example, writing in 1849 of Edinburgh's locked squares and private subscription gardens had remarked that:

"These gardens and parks have been called the lungs of the city.... (and) the public health will never be sound until the whole body¹ corporate is allowed freely to breathe through them".

Twenty five years later, Mr Griffiths the Medical Officer of Health for Sheffield was quoted by William Robinson as describing the benefits of tree planting in cities as inestimable. He explained that:

"the aggregate surfaces of the leaves of well-grown elm, lime and sycamore trees, with their six to seven million leaves, equal about 200,000 square feet, or about 5 acres; and these are almost constantly absorbing and digesting the carbonic acid and various exhalations given off by putrefaction of animal and vegetable matter, and as if grateful for such support, return into the air pure oxygen, which reinvigorates and renews animal life. Trees thus remove poison from our midst....."²

1. Begg Rev. V. How to promote and preserve the true beauty of Edinburgh: being a few hints to the Hon. Lord Cockburn on his letter to the Lord Provost Edinburgh 1849 p. 9.
2. Robinson W. "Value of Trees in Towns". The Garden Vol VIII Oct 16 1875, p 327.

And as late as 1907, Hasluck was describing parks and recreation grounds as "the lungs and breathing spaces of the town",¹ and as a means of helping to offset the effects of high density housing and their allegedly higher death rates.

Not all opinion however was on the side of the plants. In 1837 a contributor to the Floricultural Magazine had stated that the respiration of plants had a positively harmful effect on health if placed in bedrooms:

"as during the night many plants give out carbon instead of oxygen, and by that means instead of purifying the air, help to poison it."²

There were, of course, many other health bogeys and misconceptions concerning the lungs. One of these concerned the alleged contamination of the "ground air" in contact with damp soil. Beneath a house the lack of subfloor ventilation which in damp conditions was observed to cause dry rot, gave added conviction to this belief. In 1906 the Borough Engineer of Grimsby (a lecturer in Sanitary Science at Victoria University, Manchester), surmised that:

"the spores of dry rot, floating in the air are breathed into the lungs, and tend possibly to induce the growth of dangerous bacteria, bacilli and microcci in the system".³

And later still, in 1920, the Medical Research Council's review of ventilation suggested that changes in barometric

1. Hasluck P. op cit p 112.

2. An Admirer of Flowers: (Anon)

"On the Cultivation of Plants in the windows of livingrooms, showing their tendency to promote health, with their poisonous effects when introduced into sleeping apartments." The Floricultural Magazine, ed. Marnock R. No X March 1837, p 218.
(a correct observation of course, but wrong in its conclusions).

3. Hasluck op cit p.122

pressure helped to draw miasmas from the ground.¹ Also in 1920, Dr Brownlee was still painstakingly reporting on the possible correlation of tuberculosis with certain kinds of subsoil.² While, in passing, the Army's manual on hygiene, published a year earlier, continued to advise that TB and cholera could be spread by flies.³ It was against the alleged unhealthiness of damp soil, that the Local Government Board had introduced Model Byelaw No. 11, requiring the backyards of town housing to be entirely paved.⁴

But far more of a hazard to the lungs of the body corporate, was dust and smog. By the time of Hill's report in 1920⁵ the part played by dust in transmitting and causing disease was becoming clearer; it was known to greatly increase the incidence of bronchitis and pneumonia, and also to cause chronic asthma. The Report of the Interdepartmental Committee on the Physical Deterioration of the Race⁶ had reported that half of the child population of towns suffered from adenoids and other pathological conditions of the nose and throat. Hill saw this as being caused by close dusty conditions which increased infection, lowered vigour and metabolism and lessened the natural cleansing of the respiratory membrane.

1. Hill L. for the Medical Research Council. The Science of Ventilation and Open Air Treatment pt 2. HMSO 1920 p 128.
2. Brownlee Dr. Director of Statistics, MRC. An Investigation into the Epidemiology of Pthisis in Great Britain & Ireland pt 3. HMSO 1920 p 46.
3. War Office. Manual of Sanitation in its Application to Military life. HMSO 1920 p. 51.
4. MBL No. 11 LGB op cit p.
5. Hill L. op cit.
6. PP. Command 2175 HMSO 1904.

His own description of dust matches the all-pervasiveness of the yellow smog which introduces Bleak House:

"Dust pervades every nook and cranny of a house, the sunbeam shows it dancing in the air, and the polished surface of furniture shows a film of dust every morning. Every current in the house carries it along. The wind blows in dust from the street, the boots bring it in, fluff worn off clothes and hangings, and epidermic scales off the skin add to it. People fear the smell of sewer gas, revolt at dirty linen, unclean cups and plates, soiled food, impure water, but breathe into their lungs without comment the dust of the street. Motor cars have vastly increased the dust nuisance, acting as dust squirts, impelling into the air not only the dried filth of the streets but the dust from granite or flint or tarred surface. The law forbids a man to strike his neighbour, but he may assault the delicate structure of his neighbour's lung with dust."

The value of planting in acting as a dust filter in towns and cities had yet to be acknowledged.

And similarly of fog, which is made dense by water deposited on particles of dust, soot or vapours. As early as 1888 Aitken had shown that the number of particles around which water would condense was many thousands of times greater in London and Paris than in the Scottish Highlands,² and that they were the chief cause of urban smog. In 1911 Cohen and Ruston had found that the number of hours of bright sunlight in the centre of Leeds was 17% lower than on the city's outskirts; soot deposition was so heavy, and rainwater so acid, that in the most heavily-polluted parts of the city, such as Hunslet, even *Aucuba japonica* could not survive³. The London

1. Hill L. op cit p.154.

2. Aitken. Nature March 1 1888.

3. Cohen & Ruston Journal of the Society of Chemical Inst. 1911 p 1360

Fog Enquiry of 1902¹ had demonstrated that over a twenty year period, Westminster had received 36% less sunlight than surrounding rural stations, and in the four months of winter, less than half the available sunlight. Binot in the same year showed that the air over the Parc Montseuris in Paris was up to twenty-eight times less charged with bacteria than over the builtup area of the city.²

Such studies bore very directly on the means of combating tuberculosis, and it was here that their real importance lay. Robert Koch had isolated the tuberculosis bacillus in 1882, and many health organisations throughout the world, including the British Medical Association had been quick to follow up his work with a thorough investigation of the nature and means of transmission of the disease. It had long been recognised as readily transmissible within households and families, but the droplet nature of infection, the effect of sunlight in killing the bacteria, and of improved ventilation in reducing the risk of transmission were not generally understood by the public until the findings of the Astor Committee were published in 1912-13.

The Committee in their report, in addition to insisting on the cleanliness of milk and meat, laid the greatest stress upon fresh air and sunlight. Almost sixteen years ealier, Dr Russell had given similar advice to Glasgow's Health Committee in a paper

1. Meteorological Office Report of the London Fog Inquiry. publ. No 160 1902-3.
2. Binot, Comptes Rendus des Seances de la Societe de Biologie. 1902 134, p 673.

entitled: On the Prevention of Tuberculosis.¹ He had very rightly concluded that:

"A copious supply of pure air and distribution of direct and diffused sunlight within and without the dwelling are not only wholesome to man, but are directly fatal to bacilli distributed outside the animal body. Sunlight is the only disinfectant which sustains the man while it kills the microbe. Therefore whatever withdraws from the air we breathe impurity of smoke, or dust, or foul exhalation, and from the sky above us that canopy of smoke which reduces our sunshine to twilight; everything which promotes the motion of air... every byelaw which regulates the width of streets, the height of houses and the arrangement of buildings, so as to offer no obstruction to the winds, and to secure as much light and as little shadow in the hours of daylight as possible every regulation which checks overcrowding every public park, and the flowers and music which attract people thither, every open space and children's playground, every cricket and football field, every gymnasium and drill ground is a precaution against consumption."²

It was too late for such advice to have much effect on the creation of central urban open space in existing cities, but it was a persuasive influence in favour of controlling aerial pollution and of moving people away from city centres and creating spacious outlying garden suburbs to serve as the lungs of the body corporate. The members of the Tudor Walters Committee reported in 1918 that medical opinion was unanimous as to the importance of allowing plenty of sunshine to penetrate rooms; they called for the new houses in these suburbs to be spaced no closer than seventy feet, to allow the light and warmth of the low winter sun

1. Russell J. B. Medical Officer of Health. "On the Prevention of Tuberculosis". Report on remit from Committee of Health: 23 December 1895. Glasgow 1896

2. ibid pp 50 - 52.

to have sufficient effect.

Hill observed that:

"Men live long who work in the clean air of the fields. "
and that a clean and sunlit air supply was as imperative as a clean
water supply. For him, garden city planning was the means of
achieving this ideal.

VITIATED AIR AND SPACE RESERVOIRS

Apart from the assumed transmission of disease by miasmas, the medical case against "vitiating air" as a health hazard rested on the belief that all or most of the free oxygen present in a lungful of air was at once used up, and that what was breathed out was merely toxic waste. It is curious that this should have been held almost unchallenged throughout the nineteenth century, and that the sanitarian reformers should have accepted so readily statements such as that by the Edinburgh physician Combe, that:

"every person neutralises the vivifying principle of a gallon of air in one minute."¹

In this context, the analogy used by Captain Vetch of referring to urban open spaces as reservoirs (p. 28) may be readily understood. William Robinson, in advocating open spaces in London thus sought to locate them,

"wherever a too crowded population threatened to contaminate the atmosphere."²

All that remained was for the experts to calculate reservoir sizes according to the total oxygen consumed, and to the rate of airchange required to maintain a supply of unvitiating air. The difficulty was that there were too many experts and they could not agree.

While Dr Arnott estimated that an individual consumed 2880 cubic feet a day, Tredgold maintained that it was 4320 cubic

1. Combe A. : Principles of Physiology applied to the Preservation of Health, Edinburgh p. 1261.
2. Robinson W. : The Parks and Gardens of Paris. 3rd ed. London 1883 p.118

feet¹. In terms of indoor space, Miss Nightingale, who slept with her window open all year round, insisted that hospital patients should have no less than 1500 cubic feet each.² Dr Swete on the other hand considered that beds in cottage hospitals, surrounded by the pure air of the country, only needed 800-1000 cubic feet per bed.³ In France the recommended standard was equivalent to 1200 cubic feet per bed in temperate districts, rising to 1500 in hot districts.⁴ Glasgow Infirmary allowed only 1100 cubic feet, but Kings College London provided over 1800 cubic feet.⁵

Florence Nightingale had equally strong views about army barracks, and on her prompting the War Office was conscientiously applying a standard of 600 cubic feet per man well into the present century.⁶ In Glasgow's ticketed lodging houses, however, each lodger was assumed to need only 300 cubic feet, while the Inspector of Prisons recommended no less than 1000 cubic feet for each of his charges. The calculation of indoor reservoir sizes was therefore quite fraught enough without anyone hazarding to use this cubage method out-of-doors; but it hardly invalidated the need for such reservoirs.

1. Journal of the Society of Arts Vol 12, 1864, p421.

2. Hole v. The Housing of the Working Classes in Britain 1850-1914 p 265.

3. Burdett, H. Cottage Hospitals... Their progress, management and work. 2nd Ed. London 1880 p, 127.

4. Morin A. Etudes sur La Ventilation Vol 1. Paris 1863 p. 93.

5. ibid p 92.

6. War Office op cit p 37

7. Holmes W. House overcrowding and Mortality in Glasgow 1869 p 6.

8. Hole V. op cit p 265.

Translated into popular terms, the vitiation message was equally dire and equally confusing. Tegetmeier, in his Manual of Domestic Economy in 1862, gave a diagram, (Figure 14), showing the volume of air:

"rendered poisonous by a man's breathing in little more than one hour."

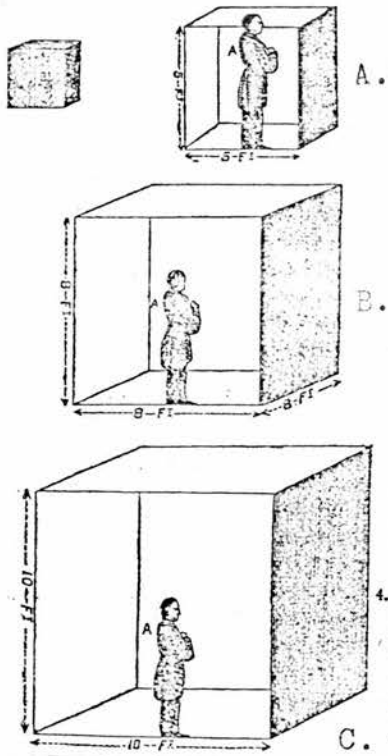


FIGURE 14 :
Tegetmeier's Comparison.

He compared it (A) with the 125 cubic feet formerly allotted to each sleeper in London's fever-ridden lodging houses; to the 512 cubic feet (B) available to each inmate of the Old St Pancras workhouse, and to the 1000 cubic feet provided in the best London barracks, (C). By present day standards the latter two were certainly generous, but Tegetmeier condemned them all as including a very injurious amount of vitiated air.

He concluded with a dire warning:

"Let it be remembered that impurity in air involves ill-health degradation and early death."

Dr Russell of Glasgow, an energetic promoter of the cause of fresh air, put it even more strongly:

"As to the frequent emission of a deadly particulate poison, no doubt whatever can exist. It is a dangerous and pernicious element in all aggregations, and combined

1. Tegetmeier W. Manual of Domestic Economy; London, 1862, p 21.

with carbon dioxide, produces when in moderate quantity, depression, headache, sickness and other ailments; when in large quantities, as in the Black Hole of Calcutta... rapid death in the majority. "¹

Russell's shadow evidently hung over the following advice offered to mothers by the Glasgow Social Union in 1891:

"Although nobody will drink dirty water, it is astonishing how few take pains to avoid breathing dirty air. Children suffer more than adults from badly ventilated houses. They are tenderer and pass the greater part of their time in the house. Open your windows a little at the top. Never keep dirt of any kind in your house a minute longer than necessary. The air of half the houses in Glasgow is made poisonous by carelessness in these respects, especially at nights. "²

Taken at face value these stern warnings, might have been sufficient to cause Glasgow's deserving poor to mend their ways. However, as they had survived in their old ways, in such large numbers, for so long, there seemed little apparent urgency: and when faced with a choice between a recommended circulation of free air, and a loss of heat, windows and ventilators were closed and draughts were put down; while outside the house, the so-called "free space" of the tenement street and overshadowed backland, for the most part, continued to serve as their only local open space.

Dr Russell and the vitiation school could turn for support to the work of Brown Sequard and D'Arsonval, published in 1887, which claimed to show that animals died when confined in small

1. Russell F. "The Atmosphere in Relation to Human Life and Health", Smithsonian Miscellaneous Collections, 1896, 39, p44.
2. The Glasgow Social Union. The Glasgow Sanitary Summary 1891, p 55-56.

spaces and supplied with the air breathed by other animals, and also when infected with water condensed from the breath of other animals.¹ Further caution was therefore not surprising by those charged with framing byelaws and administering matters of public health. The Borough Engineer of Grimsby was still advising in 1906 that

"the utmost allowable vitiation must not exceed the least amount that is evident to the keenest sense of smell."²

and that a room containing one thousand cubic feet of air should be changed three times each hour for every occupant. This same conservatism was a powerful force in favour of outdoor reservoirs of fresh air, as advocated by Vetch.

Tentative challenge to the "vitiating" school came only in 1883, with the publication of Herman's studies³ which drew attention to the significance of the great increase in heat and moisture in crowded spaces. Flugge explored these observations further and published a number of papers between 1905 and 1908; he concluded that normal individuals became uncomfortable when the temperature rose to 27-31°C, with a relative humidity of 51 to 60%.⁴

1. Brown Seguard & D'Arsonval in Comptes Rendus des Seances de la Societe de Biologie 1887, 4, p 814; and 1888, 5, 33, 54, 94, 108, 121, quoted by Hill.

2. Hasbuck op cit pp 116-118.

3. Hermans in Archiv fur Hygiene und Bakteriologie 1883 II.

4. Flugge in Zeitschrift fur Hygiene und Infektionskrankheiten, 1911, 68, 1.

Benedict meanwhile in America had shown that a man could live quite healthily in a closed chamber with up to 2% carbon dioxide, provided the air was kept dry and cool.¹ Hill carried out a similar experiment at the London Hospital, using eight unfortunate medical students, and he showed how up to 4% carbon dioxide could be introduced without ill effects if conditions were kept cool. Rowlands and Walker studied work performance under similar conditions and also reported that cooling, rather than the chemical purity of the atmosphere, was the significant variable.

In 1913 Hill and his colleagues² published further studies using white rats, and concluded that no satisfactory evidence had yet been brought forward to show that the chemical quality of the air had anything to do with the ill effects of bad ventilation; and that it was quite untrue to suppose that people in an ill-ventilated space suffered either from want of oxygen or from an excess of carbon dioxide. In 1920, Hill in his report on ventilation to the Medical Research Committee³ finally and officially discounted the

1. Benedict. Bulletin of US Dept of Agriculture 175, 235.
2. Hill L, Flack M, McIntosh, Rowlands R and Walker H. "The Influence of the Atmosphere on our Health and Comfort in Confined and Crowded Places".
Smithsonian Miscellaneous Collections Washington 1913 Vol 60, No 23.
3. Hill L. op. cit.; as Director of the Department of Applied Physiology to the Medical Research Committee. The committee had been set up in 1913 following Lloyd George's National Insurance Act of 1911. Its funds were at first drawn at the rate of a penny per annum for every insured person. It acquired its present title of Medical Research Council in 1920, when it was incorporated under a Royal Charter.



importance of excess carbon dioxide and also smell. The symptoms of distress reported by earlier researches were due merely to heat stagnation. Hill commented that:

"It is commonly taught that it is necessary to keep carbon dioxide in rooms below 0.1% so that organic poisons may not collect to a harmful extent. The evil smell of crowded rooms is accepted as inequivocal evidence of the existence of such.....(but this) smell arises (chiefly) from sweat; from foul breath..... from the passage of wind from the bowel....(and) from dirty clothes.....The smell of a crowded room is only sensed by, and excites disgust in, one who comes to it from the outside air. He who is inside is unaware of the smell....."

But even in 1921, Bulnois, the Chief Engineering Inspector of the Local Government Board, was advising that a mortuary should be surrounded "by a free belt of air".²

It is extraordinary, in retrospect, that the assumed connection between disease and smell should have persisted for so long. Flugge was largely ignored when he first pointed out that while people naturally avoided any smell that excited disgust, this disgust was not in itself any proof of poison. The assumption however, continued to be strongly held, and it did a great deal of mischief in diverting the attentions of mechanical ventilating engineers. At the same time it had a valuable effect in adding weight to the lobby seeking a better life for all in open surroundings, away from the crowded city centres. But the size of space reservoirs, indoors or outdoors, in countering supposed vitiation was no longer relevant.

1. ibid p 128

2. Bulnois H.P. Municipal Engineering London 1921 p 73.

HEAT STAGNATION & THE CAUSE OF OUTDOOR EXERCISE

The significant conclusion from Hill's review of ventilation for the Medical Research Committee in 1920, was that ventilation was important not primarily as a disease preventer (although this was partially true), but in promoting healthy and comfortable conditions by regulating temperature and relative humidity. The physiological testing of the oppression, headache, sickness, faintness and other symptoms of heat stagnation experienced in stuffy rooms were considered by the best medical opinion to offer conclusive evidence of the value of regular open air exercise.

Huntingdon 1919 had published a study of death rates in America and Europe which suggested that health was best when the average temperature was about 84^oF, and achieved indoors when windows were open.¹ Even more ideal for health and vigour were outdoor conditions when the sun warmed the skin and the breeze kept up a high rate of cooling and stimulated the body's metabolism.

Exercise promoted increased blood flow and oxygen intake, it kept the mental faculties alert, the belly organs massaged, the lungs enhanced by deep breathing and the skin quickened by an increased supply of well-oxygenated blood. Hatai in 1915² had shown that rats kept sedentary and in enclosed conditions were far less developed and healthy than those kept well exercised. Other studies were quoted by Hill to show that open air exercise

1. Huntingdon E. World Power & Evolution New Haven 1919.

2. Hatai Ann Rec. 1915 9, 647, see Hill L. op cit pt 2 118.

raised the body's protein metabolism¹, stimulated waste removal, corrected over indulgence, and according to Weber and others substantially increased life expectancy².

With such a body of medical opinion behind them, many self-appointed muscular priests were not slow to exploit these open air virtues, and the middle classes were soon jogging to many courses of outdoor exercises. Among the best known of them was J. P. Muller's System for Ladies³. Muller was an ex-officer of the Royal Danish Guards and he commended his exercises particularly to English ladies,

"as the future of the physical welfare of the race depends a great deal more on the healthy constitution and physique of the mother than on the same attribute in the father".⁴

He supported these prussian sentiments by a vigorous programme of athletics accompanied by a daily cold bath. The devotion of his followers was sometimes alarming. One German correspondent wrote that

"my husband performs your exercises early in the morning in the open air upon the roof, even when the temperature is below zero".

Dr. Hill included in his report a photograph of Muller's muscle bound baby son hardened by naked daily outdoor exercise.⁵

In 1913 the British Medical Journal published a paper by

1. Cathcart E & Leather J Proc. Roy. Soc. 1907 B 79 541.

2. Weber Sir H. Longevity & Prolongation of life 5th ed. London 1919.

3. Muller J.P. My System for ladies 4 edition & 40th thousand 1912.

4. ibid, author's preface

5. Hill op cit pt 2 p 202 figure 32.

Mackintosh¹ which stated that Britain's rural population had fallen from 35% in 1811 to only 8.8%, while in both Germany and France at that time more than one-third of the population still lived in the country. Mackintosh felt it was significant that such a large proportion of British people had been required to adapt to conditions so contrary to the rural open air life of their ancestors. Hill noted that half the poorer children of Glasgow had rickets while those of the "garden cities" of St. Helens and Bournville had very little.² He noted also the dramatic benefits of good food, rest and open air exercise in the LCC's special open air schools for weakly children, and also in the open air treatment of consumptives. Sunlight was now known to be a powerful disinfectant, and the incidence of tuberculosis to be clearly associated with sunless overcrowded conditions where droplet infection flourished. There was little respiratory disease among the troops in the trenches, hardened by a vigorous outdoor life.

So much then for the general weight of evidence supporting Dr. Hill's views and he did not stint to use it in offering advice to planners and designers.

"Confinement in still, warm atmospheres and lack of open air exercise starve the metabolism and produce the deleterious effects of city life on the physical development. The rebuilding of all industrial areas as garden cities is then required, in which opportunities for daily open air exercise, the playing of games, gardening and physical drill are available, together with the educational opportunities and indoor amusements of the present day".²

1. Mackintosh J.S. British Medical Journal August 2, 1913.

2. Hill op cit pt 2. 199-200.

3. Hill op cit pt 1., 93

And with the disciplined severity of Lieutenant Muller, he also advised that gymnasia were better built as open-air shelters, and that every school should provide compulsory daily open air exercise whatever the weather.

"The neglect of open air games, the travelling daily to school by train, the homework, and cramming for examinations raise a weakly and neurotic race".¹

Tissot & Cobbett³ had thus both been proved right in their insistence upon the rude healthiness of rural open air life. The cause of vitiated air had been at last transformed by medical opinion into the pursuit of open air exercise, and as such it continued to play a no less important but far more legitimate role in the promotion of urban recreational open space.

The last important link in this story, with modern housing, came with the founding in 1925 of the National Playing Fields Association. The aims of the Association were stated as follows²:

1. To secure adequate playing fields for the present and future needs of all sections of the community.
2. To secure proper playgrounds for the children.
3. To save the few open spaces that still exist in and around our increasingly congested cities and towns.
4. To save existing sports grounds, which are threatened with extinction.
5. To focus local opinion and provide an organisation to give it effective expression.
6. To cooperate with all local authorities and others, who are striving to secure their objects.

1. ibid. 163

2. NPFA Playing Fields July-September 1975 p. 31.

3. p. 107

From the first, the NPFA had powerful backing. Its presidents have included King George VI, Earl Mountbatten and the present Duke of Edinburgh. Within eight years of founding, it had been granted a royal charter and by the outbreak of the second world war it had dispersed over one million pounds in grants.¹

Very soon after its founding the NPFA formulated a standard of playing space needed to meet the outdoor physical recreational requirements of the population, namely five acres per thousand people. The standard was based upon a study of the age groups of the 1921 census of population, and of the proportion of people able and inclined to play outdoor sports. In 1934 the standard was increased to 7 acres/1000 to include private recreational open space,² but in 1937 the additional acre was dropped and the six acre/1000 standard has held since,³ after being reaffirmed in 1951 and 1971. This recommendation was to provide the necessary minimum open space for both casual and organised recreation in a typical community; it excluded golf courses, athletics facilities and school playing fields, and any space of an ornamental nature set aside purely for amenity; up to two acres of the six was to be provided within housing areas (see Chapter 9).

The importance of these guiding standards lay in their official adoption as a basis for all development plans prepared under the 1947 Town and Country Planning Act. Those affecting local

1. *ibid* pp 22-23, & 35.

2. NDFA Playing Fields July-September 1973 pp 46-47.

3. Only in 1948 was it in effect reduced by an allowance of two acres being made up of schools, factories and clubs open space.

recreational provision were also adopted in the official housing manuals and since 1949 have been in use throughout Britain¹. It is now therefore a quarter of a century since the nation was provided with the means of ensuring a balanced provision of local open space in towns and cities; and was, at least in theory, no longer dependent upon the private endeavours of public-spirited individuals like Octavia Hill, or pressure groups like the NPFA, for achieving such a provision.

1. Including a recommendation of "one additional acre of parks and public gardens/1000" wrongly attributed to the NPFA in the MOHLG Technical Memorandum No. 6 "Open Spaces"(1956).

CHAPTER THREE

ENCLAVED OPEN SPACE

This chapter introduces the second theme of the study, namely the grouping of housing around shared local open space. It is presented in two sections, each one dealing with a particular kind of spatial enclosure. The first reviews the importance of the parallelogram in early experiments in co-operation, and how the cash dividend diverted the true spirit of sharing which Robert Owen and others had sought. The second examines the disputed virtues of using closed parallelograms or "hollow squares", in the design of tenemented housing.

PARALLELOGRAMS OF CO-OPERATION?



FIGURE 15 :
Part of John Roque's Map of London 1746 , showing the few squares
as points of orderly reference within crowded & disorderly surroundings.

Cobbett used the contemptuous catch phrase "parallelograms for paupers" to condemn what he saw as the miserable degradations imposed by the workhouse system of poor relief. The phrase serves also in a curious and ironic way to describe more enlightened contemporary attempts at housing improvement, and intended to raise the destitute above pauperdom and to a level of self-respect.

Parallelogram was of course a term then used simply to denote rectilinear figures, and it had not at that time acquired its more specific modern meaning. In Georgian society it was a potent symbol of imposed order. The squares of eighteenth century London and Paris were island refuges - of decent regularity within seas of picturesque squalor. Closes, corners, courts and crosses occupy nine pages of the Index of Rocque's 1746 map of London;¹ squares occupy less than half a page and a mere fraction of the city's total area (Figure 15).

The parallelogram grid plan of Greek colonies like Miletus, was intended to inspire a spirit of order and rectitude; and in Georgian society at home and abroad such classical precedent became the symbol of an orderly reference within disorderly surroundings. It underlay the form of the cantonments of India, the stockades of North America, the penal settlements, barracks and courthouses of Australia just as much as the institutions and forms of British towns and cities (Figures 16, 17, 18, 21 & 28).

During the nineteenth century the symbol recurred frequently in the private utopias, company towns and the home colony proposals

1. Rocque, J. An Alphabetical index of the streets, squares, lanes, alleys etc., contained in the Plan of the Cities of London and Westminster. London 1747.

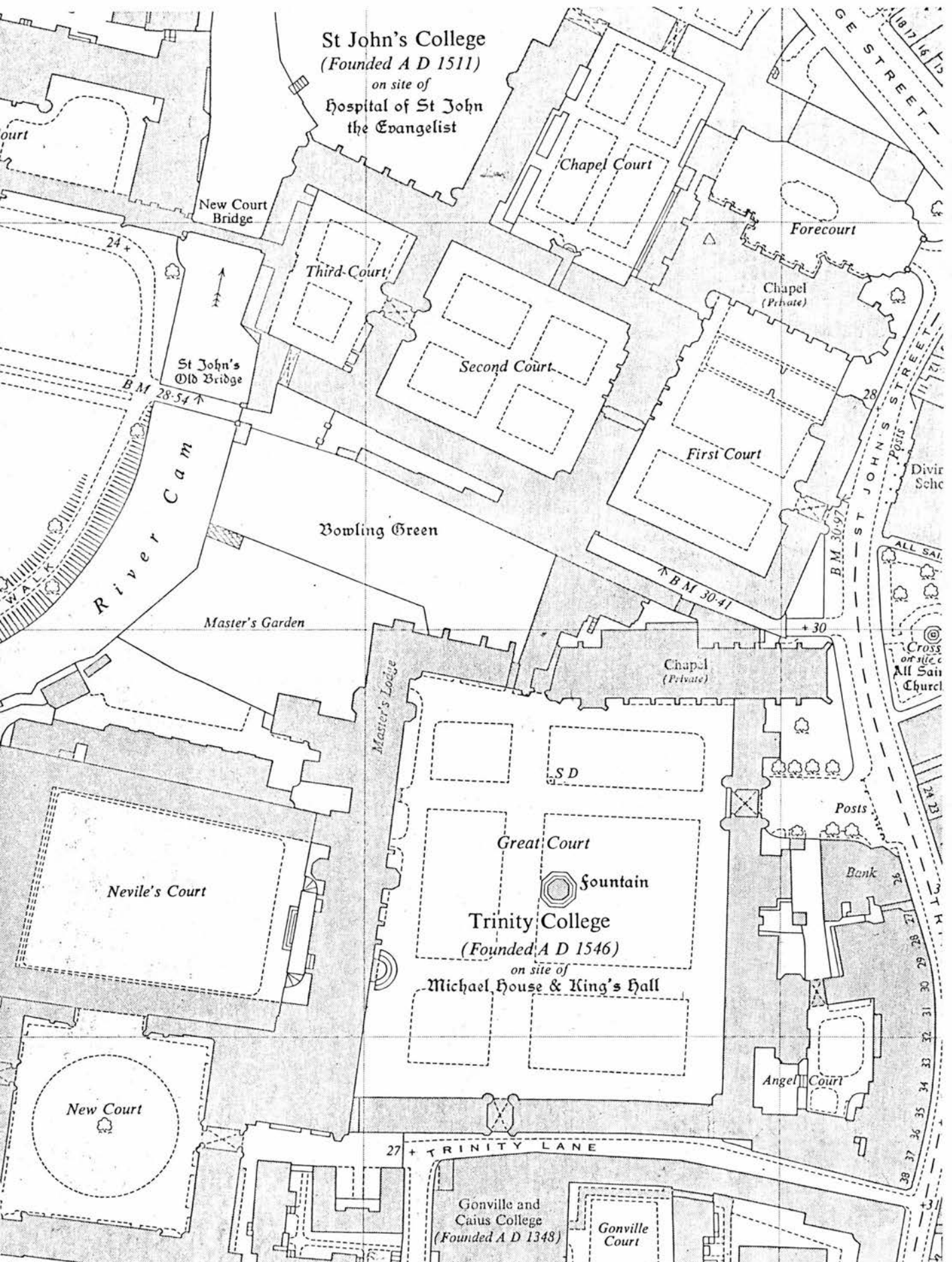


FIGURE 16 :
 Collegiate cloister courts such as those of Cambridge were one of the main derivatives of enclaved building forms like the parallelogram. The inward-looking form helped to emphasise the corporate nature of collegiate and monastic communities , and to give seclusion and privacy.

25" O.S. 1966.

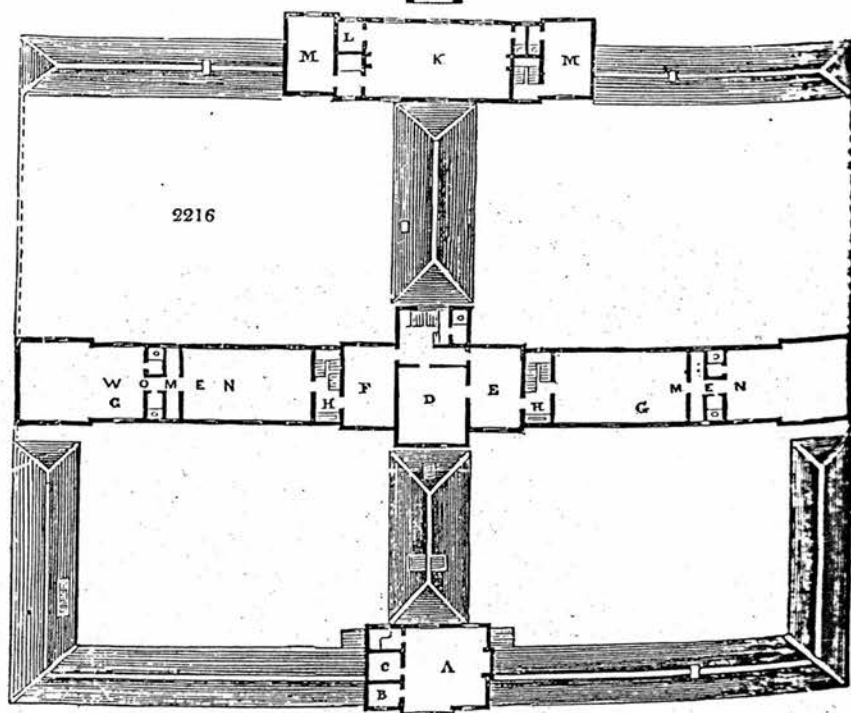
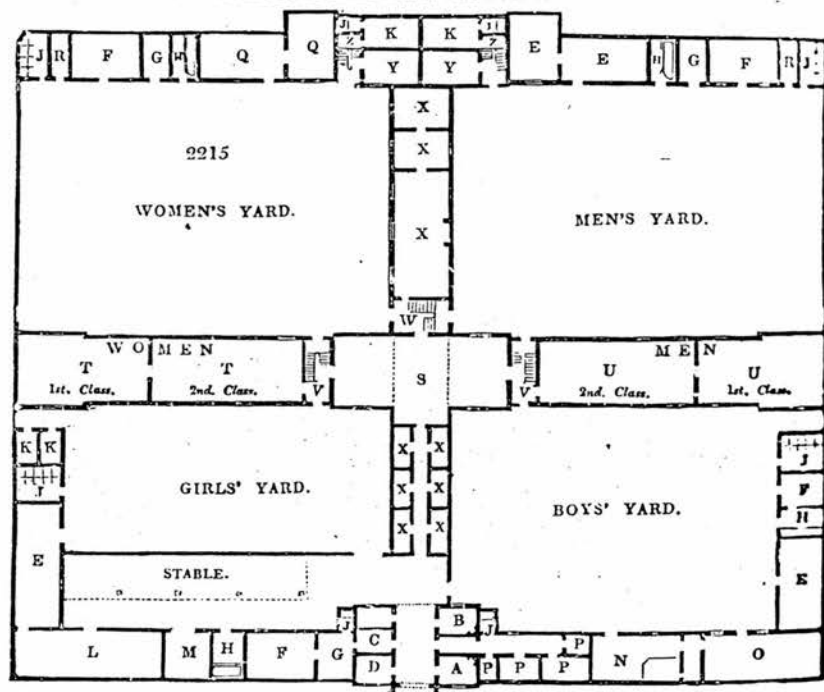


FIGURE 17 :

The parallelogram adapted for use as a poorhouse ; here the occupants met communally only once a week at chapel (S) . The design shows how easily the quadrangular form could be modified to achieve the strictly segregated requirements of the poorhouse as readily as the communal ones of Robert Owen. (design submitted by Eales for Horncastle Workhouse , Lincolnshire.)

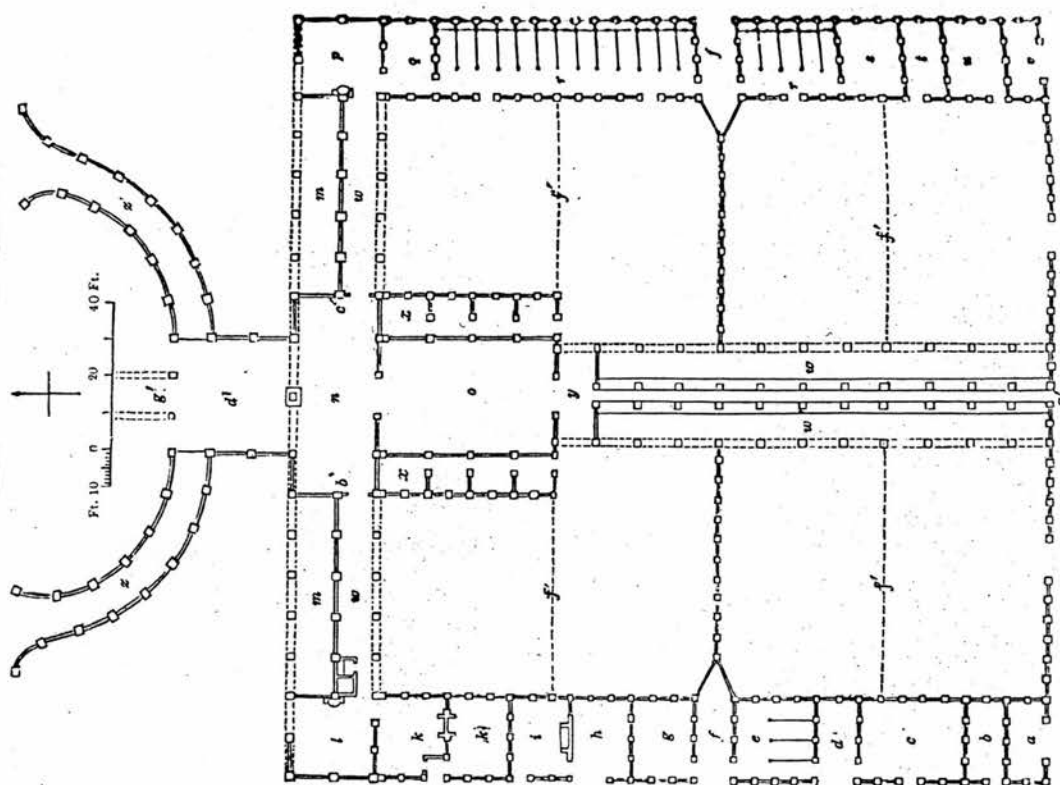
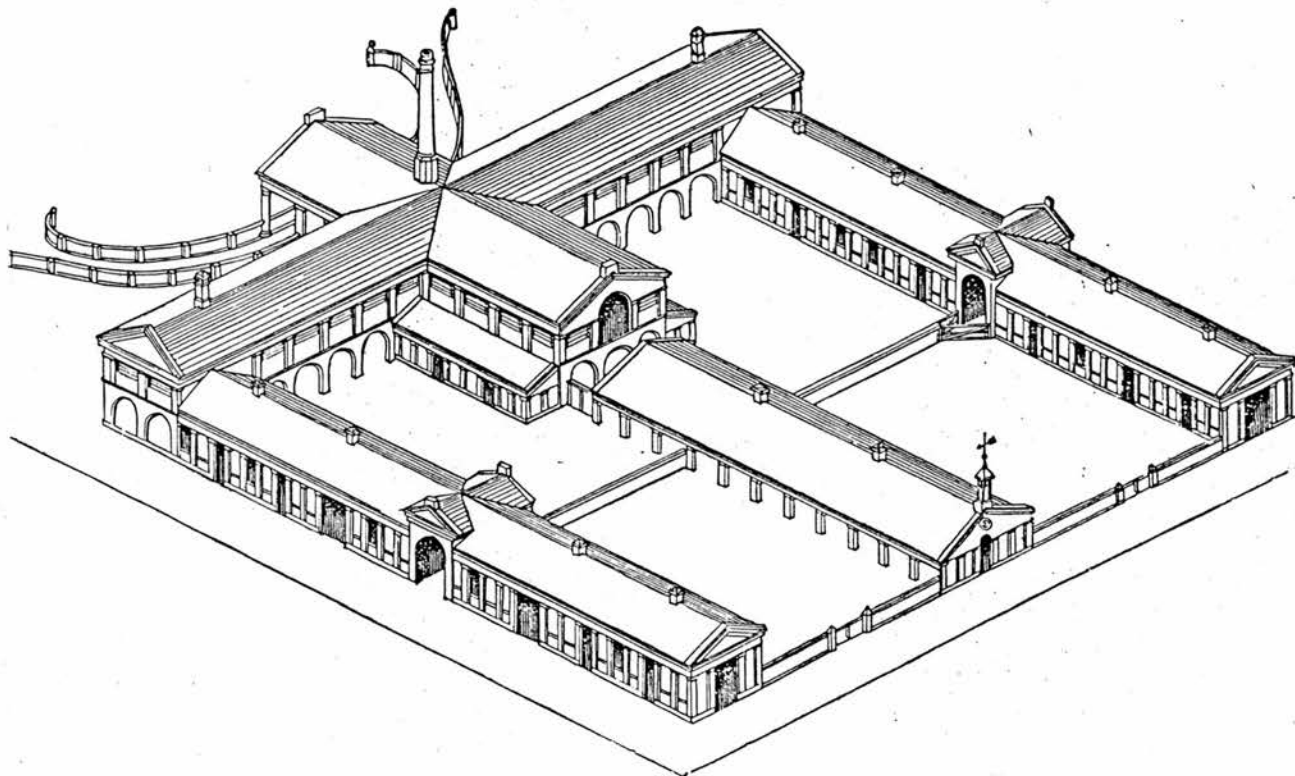


FIGURE 18 :

Farmery parallelograms ; an absurdly grand farmery in the Grecian manner , with a swept Palladian entrance serving to bring corn to the first floor threshing rooms , and the farmyards themselves dressed up as palazzo courtyards . It was proposed by J. C. Loudon for an arable farm under a six course shift in East Lothian , where only such extravagance might have been tolerated . The farms of East Lothian were famous for their size and for their huge courtyards . They drew Cobbett's indignation that such fertile land should be owned by so few .
 (Loudon J. C. Cottage Farm & Villa Architecture 2nd ed. p560)

of men like J. C. Loudon and Robert Owen. In 1821 Owen published a prospectus¹ of a plan for establishing a co-operative agricultural village on 700 acres of leasehold land in Lanarkshire. The village was to provide manual labour to help alleviate the distress of wide-spread unemployment. As if to underline the principle of manual labour, (and presumably to make the work go further) all cultivation was to be by spade and not by plough. Owen had the following to say about the form of the settlement:

"As it will afterwards appear that the food for the whole population can be provided better and cheaper under one general system of cooking, and that the children can be better trained and educated together, under the eye of their parents ... a large square, or rather a parallelogram will be formed to combine the greatest advantages in its form for the domestic arrangements of the association (Figure 19). This form, indeed, affords so many advantages for the comfort of human life, that if great ignorance respecting the means necessary to secure good conduct and happiness among the working classes, had not prevailed in all ranks, it must long ago have become universal. It admits of a most simple, easy, convenient and economical arrangement for all the purposes required. The four sides of this figure may be adapted to contain all the private apartments, or sleeping and sitting rooms for the adult population; general sleeping apartments for the children while under tuition, storerooms, or warehouses in which to deposit various products, an inn or house for the accommodation of strangers and an infirmary, etc. etc. In a line across the centre of the parallelogram, leaving free space for air and light and easy communication, might be erected the church or place of worship; the schools; kitchen and apartments for eating; all in the most convenient situation for the whole population, and under the best possible public superintendence ..."

The houses were to be up to four storeys in height with their sleeping apartments "looking over the gardens into the Country". The buildings were to be placed as close as possible to the centre of the land to be cultivated, with the gardens adjoining the houses on the outside of the square, bounded by the principal roads, and beyond them

1. Owen, R. Report to the County of Lanark for Relieving Public Distress, Glasgow 1821, pp. 27, 28, 36, 44.

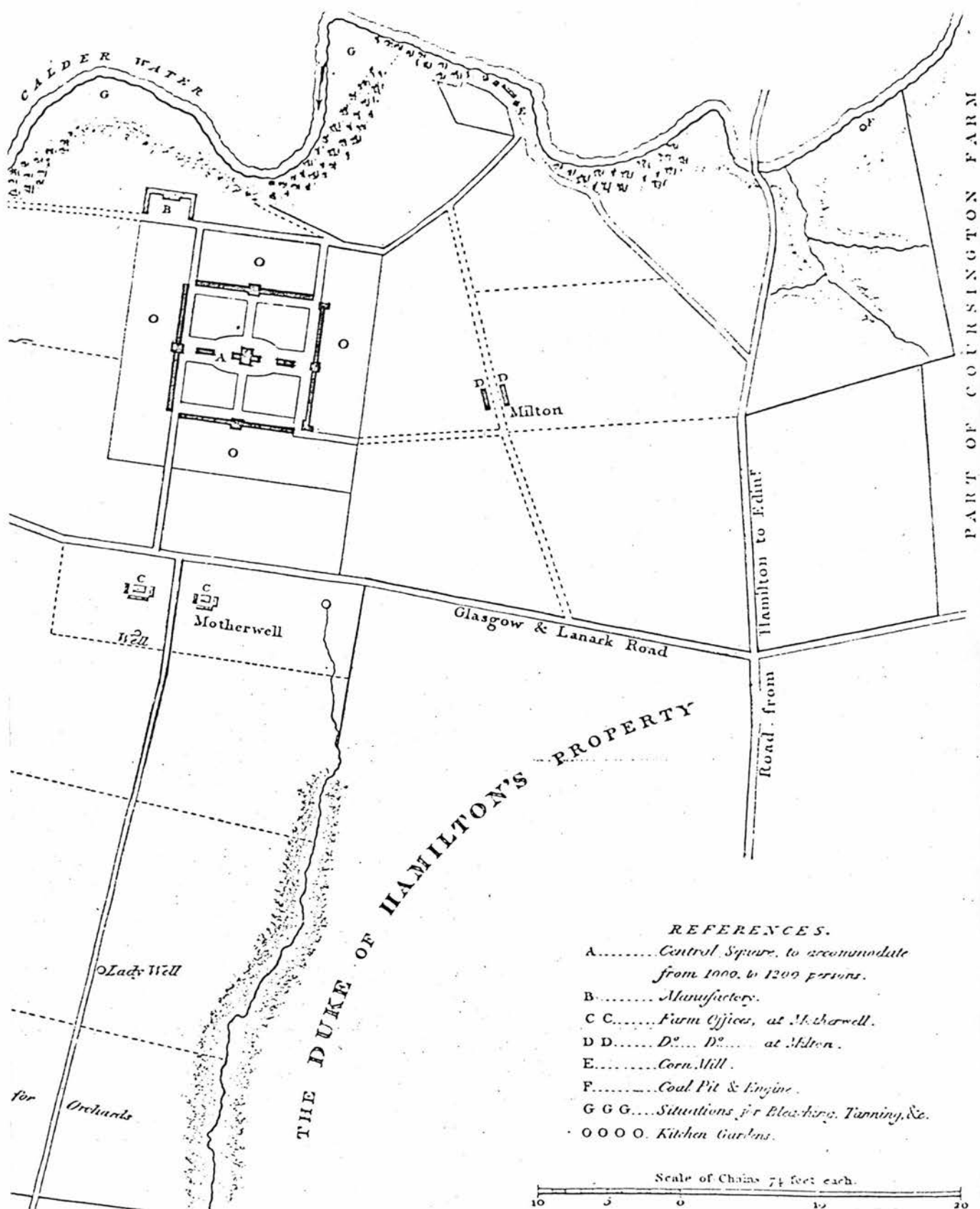


FIGURE 19 :

Robert Owen's proposal for a farming cooperative in Lanarkshire. It is ironic that this cooperative proposal was intended to be on part of the Duke of Hamilton's estate. The old method of farming by runrig was essentially cooperative, and in this part of Scotland it was at this time being quietly and effectively superseded by inclosure improvements. Tenancies of the new enclosed farms on the Duke's estate were eagerly sought both by local farmers and incomers who saw in the longer leases, the good roads, and the plentiful local labour, the certain means of fattening cattle, fruit growing and dairy production, to exploit the lucrative nearby markets of Glasgow. To such up-and-coming selfmade men, Owen's cooperative must have seemed a strange form of madness.

"at a suitable distance to be covered by a plantation . . . the work shops and manufactory". The population of the settlement was to be between 300 and 2,000 and engaged in agriculture, "with manufacture as an appendage". Sufficient land was to be allocated to all cultivators "to enable them to raise an abundant supply of food and the necessities of life, for themselves, and as much additional agricultural produce as the public demands may require from such a portion of the population".

The parallelogram enclosure proposed by Owen was essentially the same as that commonly used in the planning of gaols, houses of correction and work houses (Figure 17). It was strikingly similar in fact to agricultural work houses like that at Veerhusen visited by a deputation from the Highland Society of Scotland¹ (Figure 20).

Founded in 1822 by the Benevolent Society of Holland, this consisted of a parallelogram with each side six hundred feet long; and it provided accommodation for destitute families and orphans who earned their keep as farm labour. They were taught farming, given an elementary education and the idle were flogged. Communal facilities included a washhouse and a bakehouse, but otherwise the parallelogram form had no intrinsic social value. To many in Britain, such institutions merely held out the promise of reducing parish poor relief by making the poor self-sufficient; but not to Robert Owen.

1. Anon: An Account of the Poor Colonies and Agricultural Workhouses of the Benevolent Society of Holland: by a member of the Highland Society of Scotland, Edinburgh 1828. pp. 159.

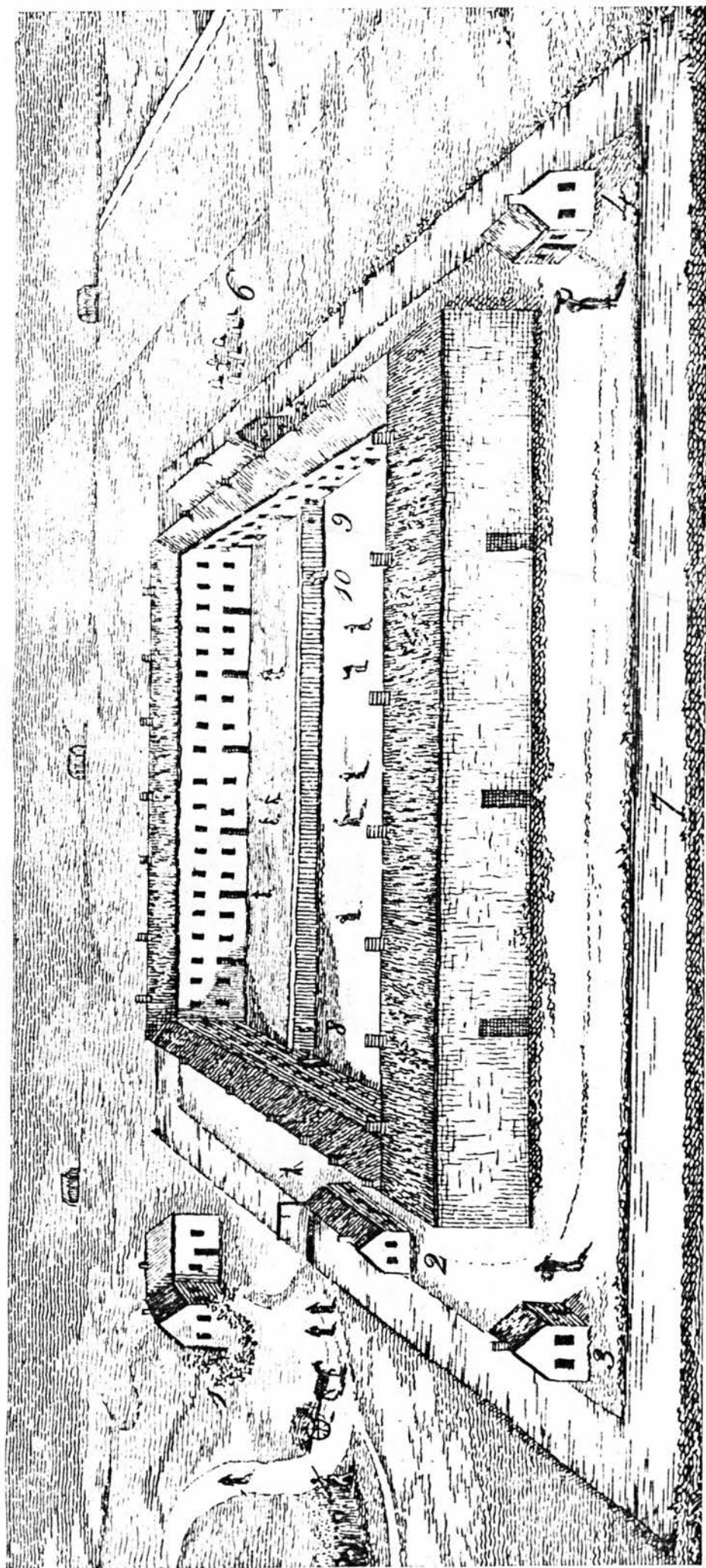


FIGURE 20 :

A parallellogram pauper colony at Ommerschans , Holland ,
founded in 1822 as an agricultural workhouse for over a
thousand " colonists " , and with a communal bakehouse ,
wash houses and other shared offices .

The product of his visionary ideals he described in his prospectus¹ as follows:

"Instead of the unhealthy pointer of a pin - header of a nail - or piercer of a thread - or clodhopper senselessly gazing at the soil, or around him, without understanding or rational reflection, there would spring up a working class full of activity and useful knowledge, with habits, information, manners and dispositions that would place the lowest in the scale, many degrees above the best of any class which has yet been formed by the circumstances of past or present society".

The simplicity of his parallelogram proposal was matched by his simple faith that in it lay a panacea not only for local unemployment, but also the means of a colonial programme ushering in a millenium of universal benevolence and content. He saw it as the instrument for breaking down the self-centredness of the family unit, and of creating an enlarged vision of society; and he conceived of a world covered by such villages of co-operation, each with a communal life, equality of wages, and free education; and each self-governing but in association with its neighbours.

The idea at first received enthusiastic support. Ratepayers, on the one hand, saw it as a means of reducing the increasing burden upon parish poor law relief, and on the other hand, destitute workers the means of rising above the degradation of mere subsistence. But it had a fatal weakness in requiring the backing of a large amount of capital, most of which could only be raised by subscription from among the wealthy; and when the wealthy realised that Owen's proposal struck at the very heart of profit-making, their support became noticeably cool.

1. Owen, R. Report to the County of Lanark ... for relieving public distress. Glasgow 1821, p. 45.

The proposal died, and it was left to Archibald Dalzell of Hamilton, and Abram Combe, a wealthy Edinburgh tanner and brother of the phrenologist, to bring it back to life on a site at Orbiston, near Motherwell (Figure 19). In 1826 work began on the great parallelogram, which was named "New Harmony". Within a year it had gone far to fulfilling Owen's ideals.¹

It had a self-governing population of several hundred; labour and not money had been made the standard of exchange; workshops and a school had been established, and a fortnightly newsheet produced.² But it had also met difficulties. There were disputes over the taking of jobs outside the settlement, criticism that the riff-raff were being attracted, and more fundamental, the constant threat of outrunning capital. Nearby clergymen were deeply suspicious, and local people referred to the settlement as "Babylon". And then in 1827 Combe died, and his brother William, under pressure from creditors, sold up. The settlers were evicted and those who had invested their savings lost all, while the parallelogram, but quarter finished, was pulled down and vanished without trace.³

The history of other Owenite villages, with their New Harmony parallelograms, is well enough known.⁴ Proposed settlements at Exeter and outside London failed to raise the necessary capital, while

1. Owen himself was not directly involved, but was a visitor to the settlement.

2. The Register, edited by Combe, Nat. Lib. Scot. Cat. NE.23.L.S(7).

3. All that survives is a pair of columns set up in the grounds of the Duke of Hamilton. See Cole GDM, A Century of Co-operation, Manchester 1944.

4. See biographies of Owen, also in particular Vesey's co-operative at Exeter in The Co-operative Magazine, iii, 1828, pp. 42-46.

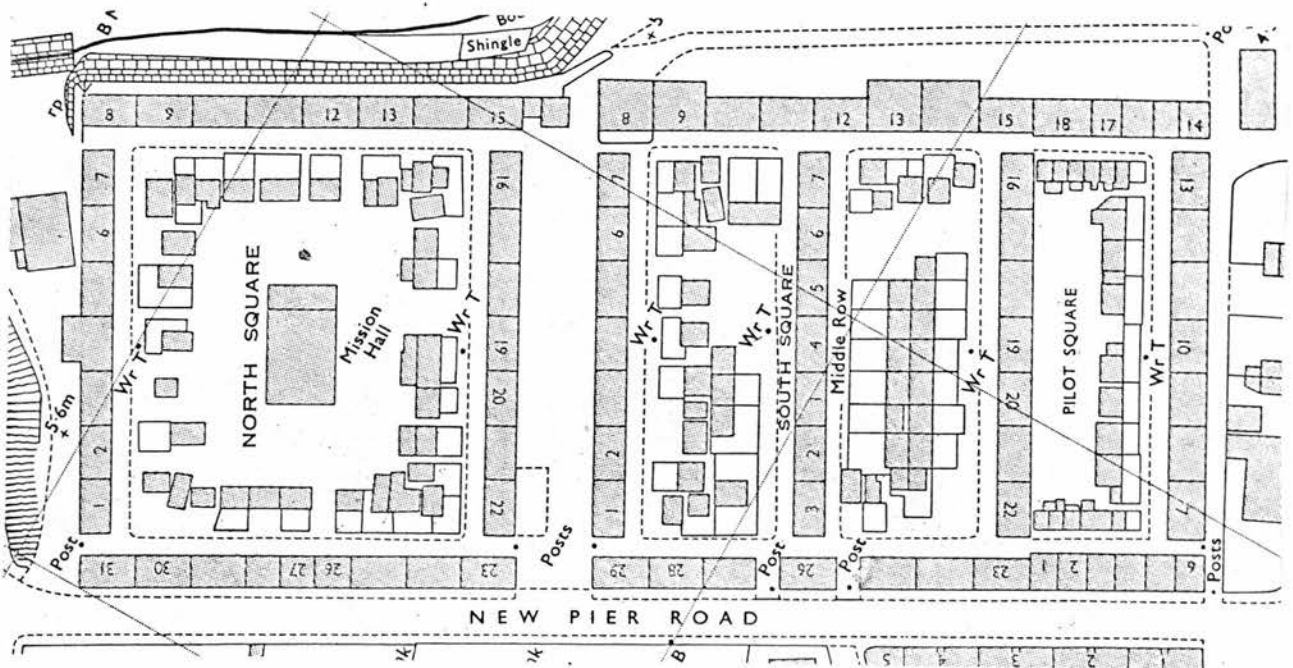
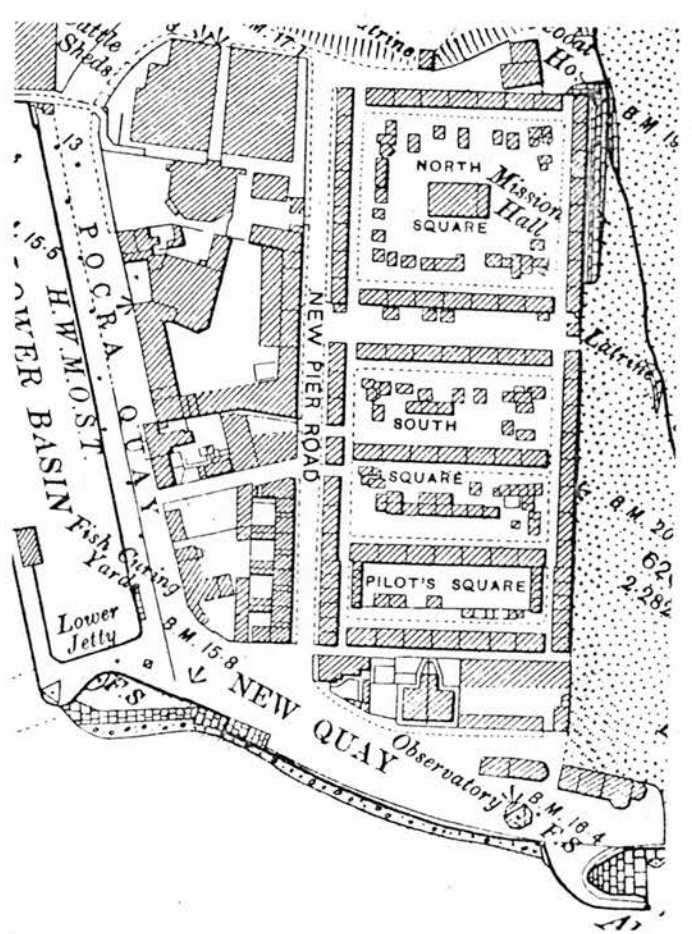
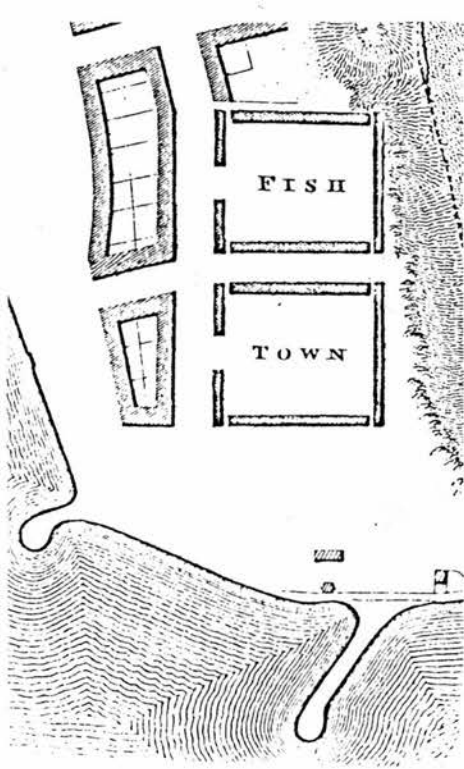


FIGURE 21 :

An amusing but vain attempt to impose the Georgian order of the parallelogram upon the sturdily independent fishing community of Footdee , Aberdeen . During the early years of the last century the old settlement of Footdee was declared insanitary and the inhabitants were rehoused in terraces of cottages arranged as above in well-regulated parallelograms. The enclosed spaces , far from instilling a new and disciplined cooperative order , became cluttered with summer houses , sheds and stores . They are now known as " The Hutties of Footdee " , and were designated a Conservation Area in 1972 .

50" O.S. 1901 & 25" O.S. 1972.

Owen's American ventures foundered in haste and confusion. But there yet remained the chance of success through Co-operative Societies.

These societies were described by the Scottish Owenist

Alexander Campbell as:

"generally composed of the working classes; and their capital, held in small shares, payable in instalments, applied to the following objects: the purchasing at wholesale prices of such articles of daily consumption as the members require, of retailing out to them and others at the usual retail prices, adding all profits to stock for the further object of giving employment for members who may be out of work or otherwise sufficiently employed, and thereby still increasing their capital to obtain their ultimate object - the possession of land, the erection of comfortable dwellings and asylums for the aged and infirm, and seminaries of learning for all, but more specially for the formation of superior character for their youths, upon the principles of the new society as propounded by Robert Owen."¹

Owen himself opposed these ideals until persuaded that the interest in mere shopkeeping was only a means to his ends. By 1831 there were over 500 such Owenite Societies in Britain, but none was to achieve a New Harmony.² As time went on, the members of such co-operatives were content to accept the social inequalities of wealth, and to simply pocket the profits of their own enterprise, as cash dividends. Their attitude was rather abruptly summed up by William Smith of Bridgenorth:

"We have seen enough of Communism . . . enough of the Utopian ridiculous mummery of Socialism . . . We don't want it; we have seen the new rural world and we don't like it . . . let Co-operation be what it is . . . let it inculcate no other spirit but gratitude to God, loyalty to our

1. Letter dated 26th January 1831, quoted by Maxwell W. The History of Co-operation in Scotland. Glasgow 1910, pp. 58-59. See also Himeimy 1: The Development & Organisation of the Scottish Co-operative Movement. Ph.D. Edinburgh University, p. 5, for the first of these societies, formed as joint stock victualling companies.
2. Pollard, S. "Nineteenth Century Co-operation: From Community Building to Shop-keeping" in Essays in Labour History. In France at this time the socialist Fourier planned a network of colonies (phalāxes) very similar to those of New Harmony; by 1850 this was upwards of thirty but all eventually failed.

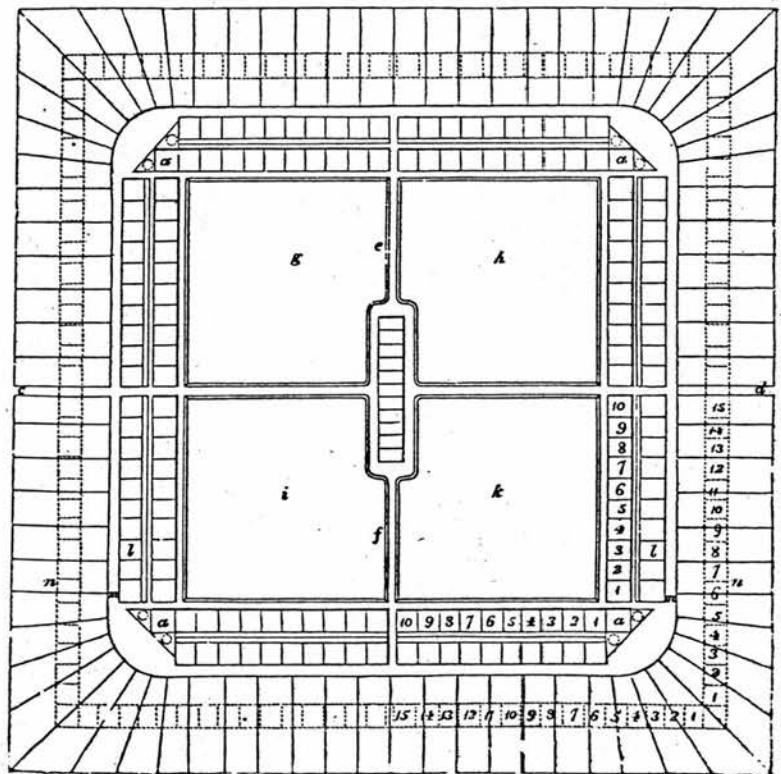
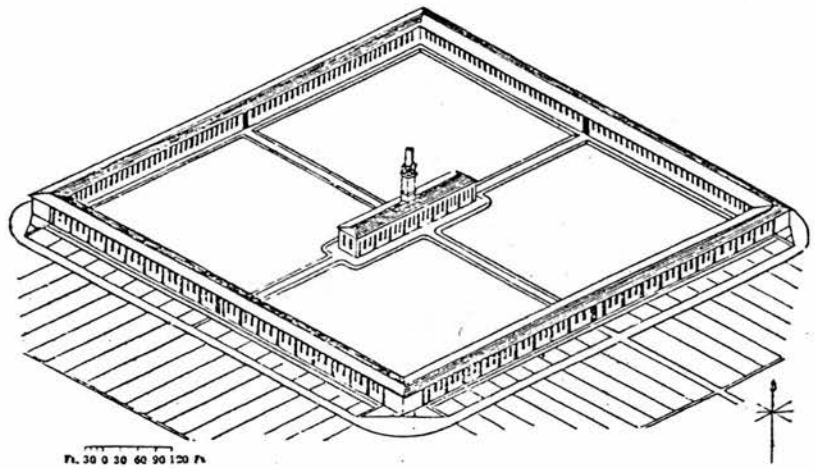


FIGURE 22 :
J. C. Loudon's parallelogram cooperative " Workingman's
College " ; following the collegiate tradition of enclaved
space , and Robert Owen's earlier parallelogram of
cooperation .

Sovereign, love to our country, and good will to all mankind . . . in the cause of constitutional competitive co-operation."¹

The co-operative principle applied to parallelograms was further elaborated by J. C. Loudon. Loudon had visited New Lanark and greatly approved of Owen's ideas. In his Cottage Farm and Villa Architecture² in 1833, he published a plan for a "working man's college", obviously based on an Owenite village of co-operation (Figure 22). It comprised a terrace of 80 single-storey dwellings of the cheapest mud cob, forming the sides of a quadrangle, and located within convenient reach of a large town like London.

The college was to be provided with land enough for spare-time cultivation. In the centre, and ranged about a central firehouse and flue, were to be a communal kitchen, brewhouse and bakery, dining room, schools, stores and a laundry, while the surrounding open space within the quadrangle was to be divided into four compartments for public gardens and playgrounds. The corners of the quadrangle were occupied by communal lavatories, the women and children having access from within, and the men and boys from without. Each dwelling was to be heated by circulating underfloor hot water, from the central boilerhouse, and each provided with a small flower garden outside the quadrangle, with further ground beyond a perimeter service road for vegetables and for the college's dairy, piggery and poultry house.

1. Cooperator ii (1861-2) p. 68 quoted by Pollard S. op cit.
2. revised edition by Jane Loudon, pp 244-6.

Loudon's intention was to show how economically the co-operative principle might be applied to substantially raise the living standards of the poorest housed workers. He calculated that the whole college might be provided for less than £5,000, which was considerably less than the projected cost of the New Harmony at Orbiston. Unlike Owen he attached little significance to the parallel-ogram form; it merely offered greater convenience and economy; and although he approved of Owen's work-sufficient villages, he gave their form a potentially wider application by suggesting that they might be regarded almost as dormitory rural suburbs, giving their inhabitants the opportunity of working in neighbouring towns, without the disadvantages of being actually housed in them, and of having to accept greatly inferior housing conditions. And finally Loudon expressed doubts as to the success of such a venture; until "superior education" allowed the participants to see themselves the benefits which would accrue from them, working men were more likely to prefer isolation to co-operation.¹

Sidney Smirke in 1834 published a similar idea to Loudon's involving the building of a village for London's working classes in the open fields of the city outskirts. The form was less developed than Loudon's, but the housing was to be in rows to allow central heating, and was to include open space for recreation "where healthy exercises and the innocent pleasures of Society" might be enjoyed during the hours of leisure and the days of rest.

1. *ibid*, 1139.

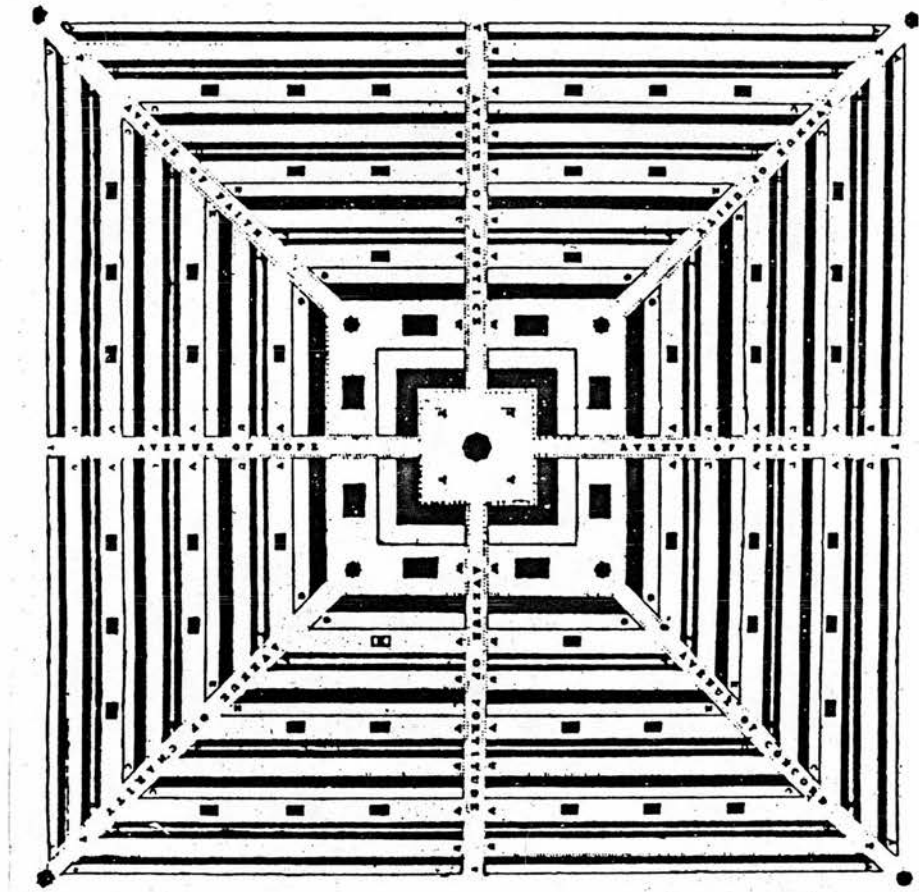


FIGURE 23 :

James Silk Buckingham's well-known parallelogram plan for "Victoria", a model town combining Owenite communal kitchens, laundries, schools and baths within eight hour day and free medical services. The communal buildings were to be grouped at the centre, and factories at the perimeter. Like Justitia's proposal it was little more than a diagram, but interesting in enlarging Owen's parallelogram of cooperation to serve the requirements of a town.

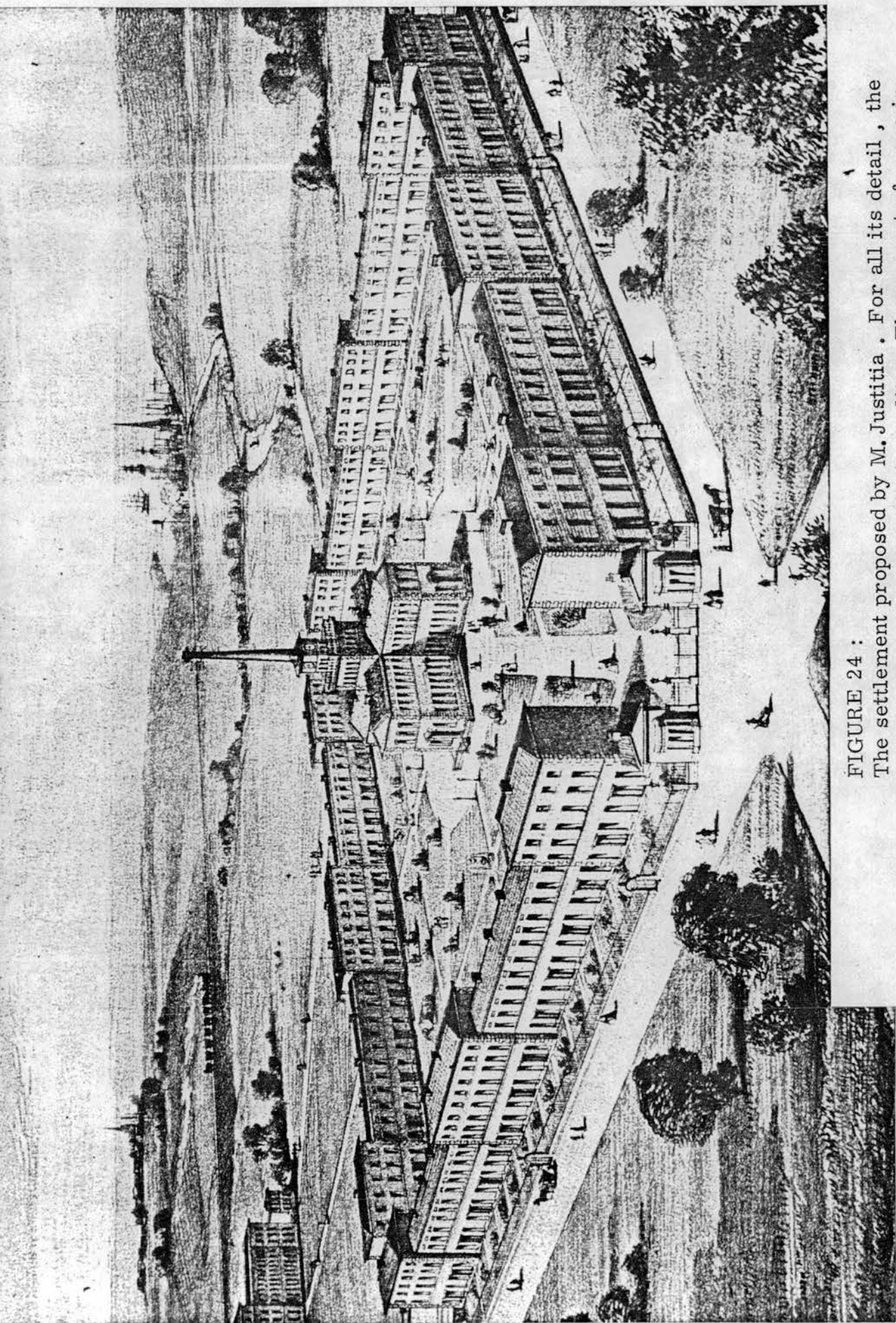


FIGURE 24 :

The settlement proposed by M. Justitia . For all its detail , the project was greatly lacking in reality . The amount of space in the centre being quite inadequate for meeting the various activities suggested .

Silk Buckingham's well known proposal for his model town of Victoria was made some ten years later; it was developed around a central parallelogram (Figure 23). A more closely related project to those of Owen and Loudon, was that of a worker colony, published anonymously in 1855 by "M. Justitia"¹, a self employed workshop engineer (Figure 24). He appeared to have borrowed, without acknowledgement, Loudon's parallelogram form and central community block, to accommodate the families of workers needed to service a hypothetical factory established in the country. Figure 24 shows the workers' houses arranged round the four sides of the central space, in three storey houses, each with a bath and w.c., and a back and front garden. The corners of the square were to be open and the central space used for children's play and cricket, 'also vegetables and flower gardens intersected by walks tastefully laid out, 'so that the useful and the ornamental may be suitably combined'.

The enterprise was to be financed by a joint stock company in which the workers would share, and the author expressed his faith in the value of sharing, as follows:

"It is to 'co-operation', 'combination', 'association' whichever it may be called, that we owe our achievements in the works of art and science. Our monumental institutions, the iron highways that ... link our most distant towns - our crystal palaces ... - the manufacture of gas, by which the darkness of our towns is dissipated - the bringing of water, that first necessary of life ... to every house in the crowded city - all, are the result of the powerful principle."²

1. Justitia, M. The Relative Rights and Interests of the Employer and Employed. Loudon 1855.

2. *ibid*, p. 33.

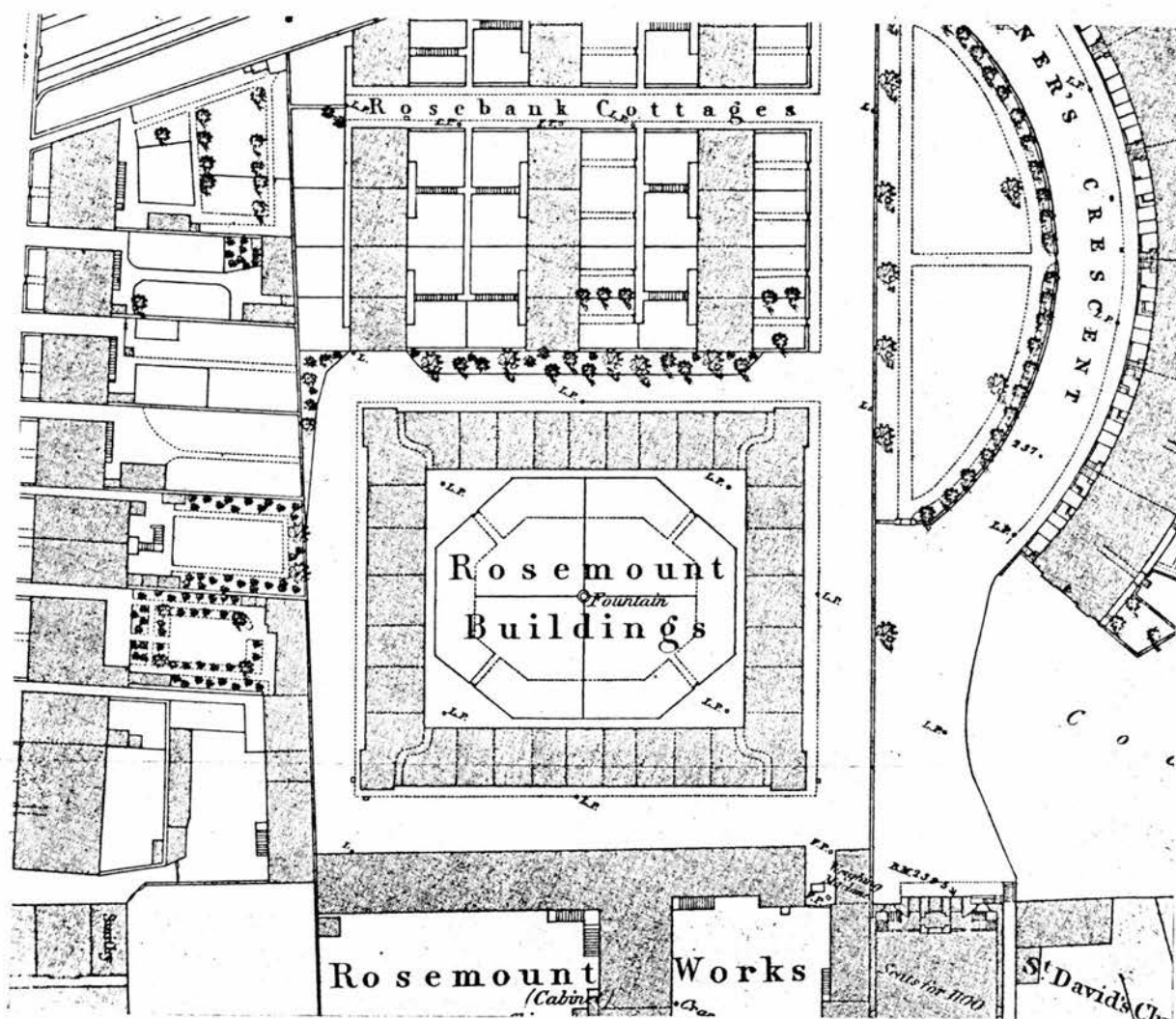


FIGURE 25: Rosemount Buildings, Edinburgh, 1859

A 3 storey brick parallelogram, English in inspiration and quite untypical in Scotland, built by a joint stock company under the Act of 1856, with shareholders' liabilities limited to the amount of their shares; described as the Rosemount Association, and the work of a Mr Marshall.

(see MacPherson A Report of a Committee of the Working Class of Edinburgh on the present overcrowded and uncomfortable state of their dwelling houses Edinburgh 1860 p4)

60" OS 1881

But Justitia's joint stock proposal represented the new capitalist co-operation of people like William Smith; it had little to do with Robert Owen.

None of these proposals was to have any immediate effect, but something of the character and co-operative nature of Loudon's idea may be found in an attempt at housing improvement at Rosemount, Edinburgh, in 1859 (Figure 25). This also took the form of a large parallelogram; it was a three storey brick building, containing ninety six flats enclosing a central garden court. The corners, as in the Loudon plan, were occupied by shared facilities, in this case the washhouses, stores and common stairs to the upper flats. But in Scotland such ideas were to remain well outside the mainstream of Victorian housing development.

The co-operative principle meanwhile continued alive and well, but by virtue only of the cash dividend. Many co-operative building companies were formed; their intentions were, however, not to promote co-operative living in New Harmony parallelograms so much as to give the better-off working class the opportunity to buy or build their own houses on their own plots and in imitation of the middle class. As a columnist remarked in The Co-operative Magazine,

"intelligent mechanics who had 4/- a week to spare, were too well off to think of communities".¹

The spirit of self-help had begun to replace that of co-operation.

One of the most successful of these new ventures was The Edinburgh Co-operative Building Co. Ltd., registered in 1861.² By

1. The Co-operative Magazine, ii (1827), p. 149, quoted by Pollard, S., op. cit., p. 81.

2. Royal Commission on Housing of the Working Classes (Scotland) 1884-5, xxxi, pp. 35-36.

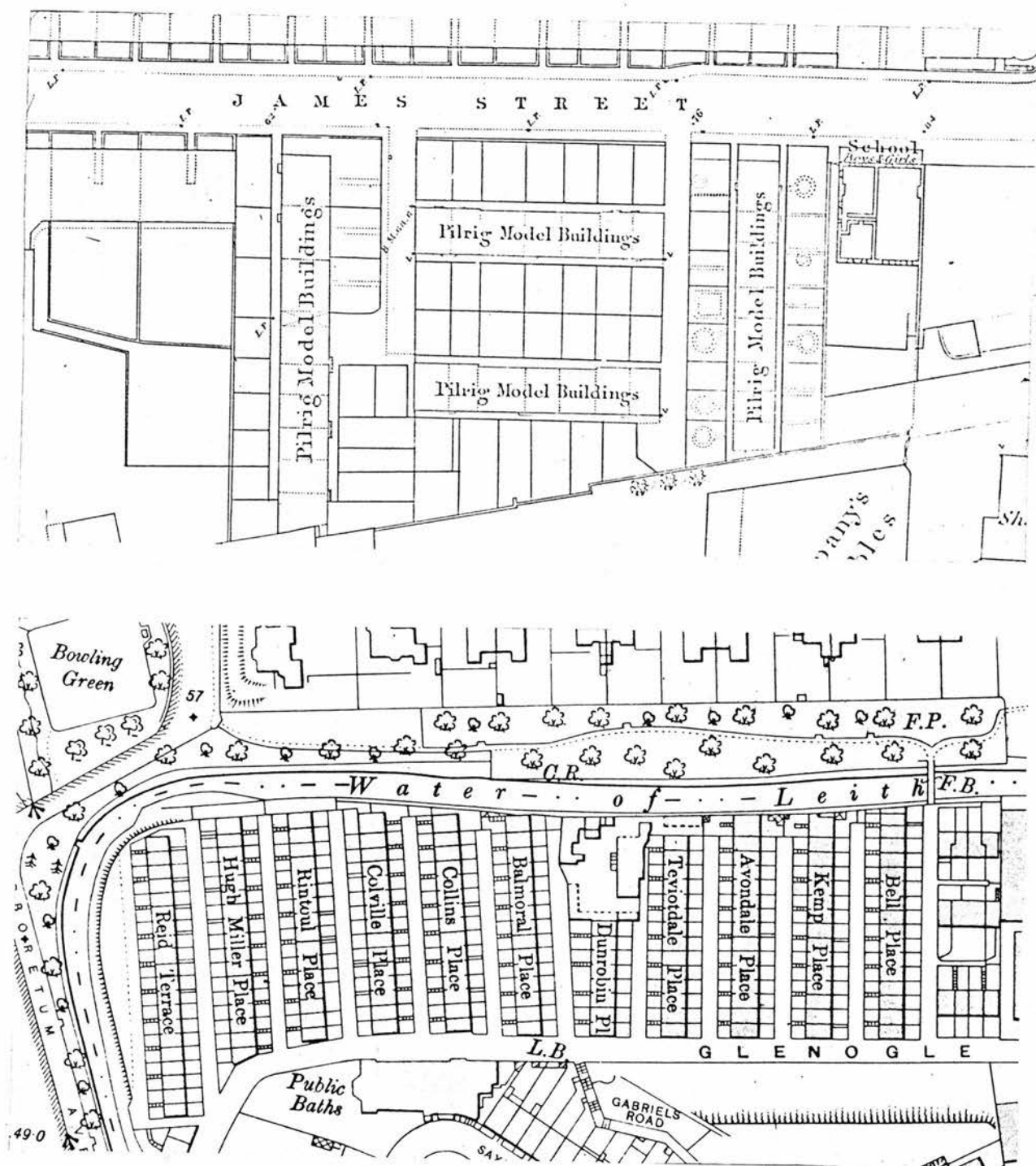


FIGURE 26 :
 (above) Pilrig Model Buildings (1850-1851) at Leith Walk ;
 early cottage-type flats of the kind later developed by the
 Edinburgh Cooperative Building Co Ltd , and modelled on
 Rosebank Cottages adjoining Rosemount Buildings (Fig 25).
 (below) the first project of the Cooperative , at Stockbridge ,
 the physical form far removed from an Owenite parallelogram
 of cooperation .

1885 the Company had built some 1450 cottage flats at a cost each of between £130 and £250. Prospective owners paid £5, and the Company borrowed the balance needed to build, from a property investment company, and repaid it at some £13 p.a. over fourteen years. In this way the industrious artisan could buy his house for little more than the rent he would have paid for comparable accommodation, while the property society investors were paid up to a healthy 10% dividend, and sometimes even more.

Dr Begg, in laying the foundation of the first of these houses in Edinburgh, commented on this capitalist cooperation as follows¹:

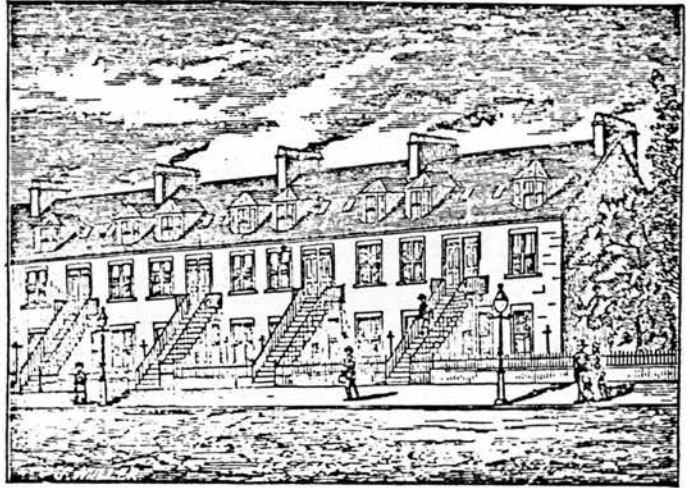
"working men....were not so strong in purse individually as men who had independent fortunes; but if they clubbed their resources together they would prove the strongest class in the community, not only physically but financially."

Begg believed passionately that the working man could achieve owner-occupation with rigid economy and self-discipline, through such cooperative ventures. He saw this as the solution to squalid rack rent tenement housing, and was convinced that the dignity of the worker would be raised by ownership of his cottage; that it would provide security in sickness and unemployment, the attainment of political rights and inducement to social betterment. The total contribution of such cooperatives was to remain small, but for the most part they amply demonstrated the correctness of Begg's views.

1. Begg Dr J. Happy Homes for Working Men, Edinburgh 1866 pp 28-29.

MODELS BUILT BY THE GLASGOW WORKING MEN'S
INVESTMENT AND BUILDING SOCIETY.

See Advertisement, p. 23.



UPPER-FLAT HOUSES, WITH ATTICS.

THE GLASGOW
WORKING MEN'S INVESTMENT AND
BUILDING SOCIETY
(LIMITED),

*REGISTERED UNDER THE INDUSTRIAL AND PROVIDENT
SOCIETIES ACTS 1867,*

Erects Houses on the Best Models for its Members in any part of GLASGOW or SUBURBS, under the Superintendence of its Manager and experienced Workmen in its employment. The prices of the Houses are payable at once, or by a Rent-charge spread over any number of years not exceeding twenty-one. By this means it is in the power of

EVERY MAN TO BECOME HIS OWN LANDLORD.

Shares, £25 each,

Payable by WEEKLY or FORTNIGHTLY INSTALMENTS of
SIXPENCE per Share per Week.

FIGURE 27 :

A Glasgow cooperative modelled on the Edinburgh Cooperative Building Society, and, like it, transformed into a venture of group self-help, with the emphasis on dividends and profit.

In Edinburgh the design of these small cottage estates turned very deliberately away from the shared stair, close and wynd of the Scots tenement. They were based upon earlier improved housing at Rosebank and Pilrig (Figure 26) consisting of rows of cottages, one above the other in two storey buildings, entered from opposite sides of the row and each with its own garden. They were in fact the very epitome of a highly compartmented non-sharing community. No common courts or greens were provided, and shared access and services were reduced as much as possible.

They had about them in general a kind of brave but pinched gentility which reflected their artisan owners' aspirations towards more generous villadom (Figure 27). In spite of their meagre space standards they remain successful and popular to this day and have even raised the level of their occupation to the professional middle class at a time when the more prosperous of the artisan blue-collar community have achieved their ambitions in a detached bungalow in an outer suburb.

In Scotland, the parallelogram form became as we shall see, the basis of the characteristic so-called "hollow square" tenement development, not for any altruistic reasons of cooperation but simply in response to the orderly discipline of the surveyor's grid and the minimum requirements of ventilation; the social value which Owen and others saw in its form were ignored. In the South, the Peabody Trustees made convenient use of it in their gloomy overshadowed tenement courts in which the children of tenants were allowed to play,

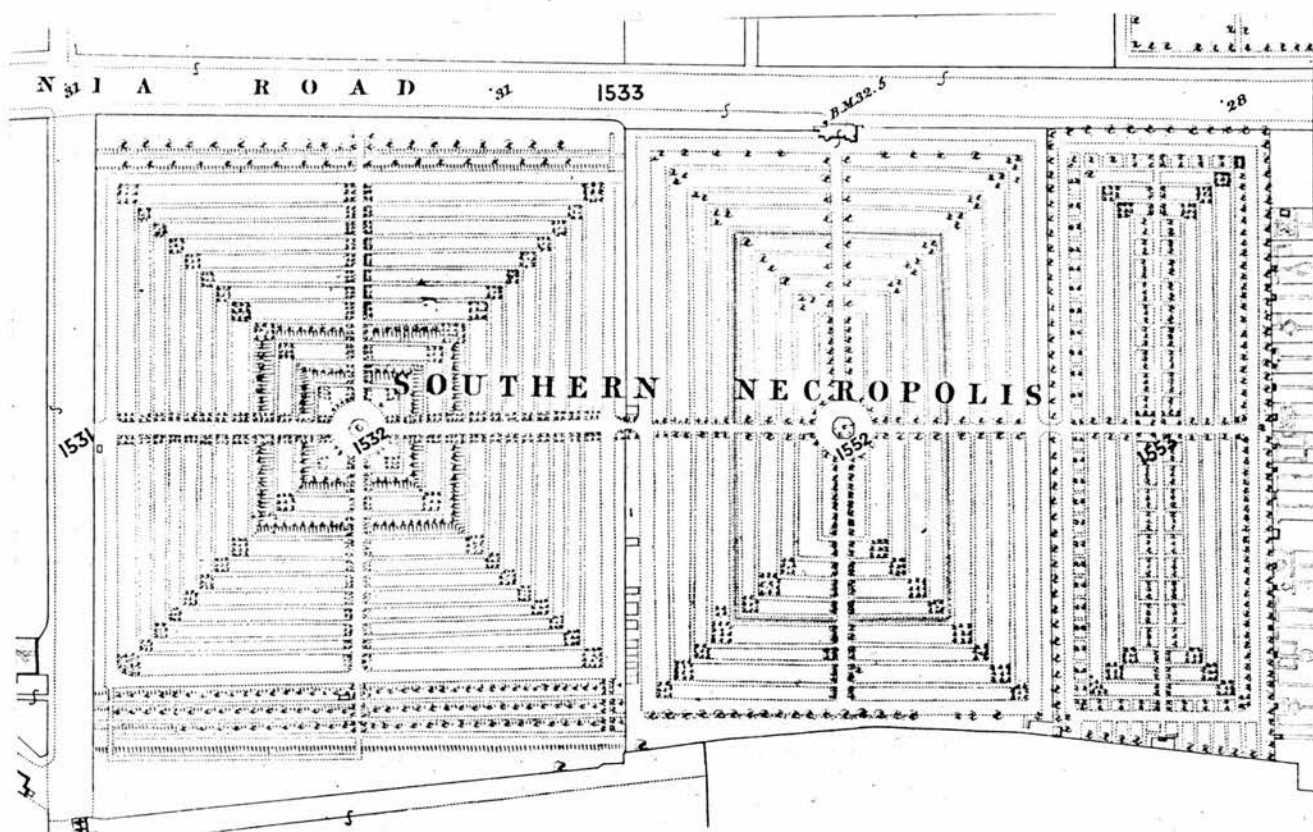


FIGURE 28 :

The Southern Necropolis , Hutcheon , Glasgow — the final parallelogram of cooperation ? The close proximity of life in the " hollow square " tenements of Hutcheon and Gorbals , shrunk to still greater intimacy in death . Compare with the form of Silk Buckingham's Victoria , (Fig 23) .
25" O.S. 1861 .

"untainted by their surroundings".¹ These grim fortresses merely used the parallelogram form to turn away from the surrounding squalor. While they certainly represented improved conditions for their tenants, they offered little of the Owenite spirit of cooperation, except perhaps in the sharing of a clubroom and communal laundry.

To what extent parallelogram forms could positively aid cooperation was of course contentious. It was no doubt a highly questionable assumption on Owen's part that the physical form of his New Harmony could have exercised any major influence on the success of his venture. But then Owen was a very deterministic man, and like Octavia Hill, he believed in people being improveable. Later parallelogram forms discussed in this study (p.274f) strongly suggest that cooperation was likely to be greatest when its benefit to the individual pocket was greatest. Just how much these enclaved inward-looking forms of housing encourage cooperation today may be judged from the case studies discussed in Chapter Eight. One of these studies, at Southfield in Edinburgh, shows how modern cooperative housing has successfully adapted the Owenite parallelogram.

1. Henry Derbyshire, architect to the Peabody Trust first developed there tenement parallelograms for Angela Burdett-Coutts at Columbia Square, London. See Tarn J. Working Class Housing in Nineteenth Century Britain, Architectural Association Paper No 7 1969 pp 15-16.

THE HOLLOW SQUARE

One of the more important attempts to provide adequate open space about working class housing in nineteenth century Scotland was waged under the banner of ventilation, and it concerned the disputed virtues of the so-called "hollow square". This term was used to describe any closed internal court surrounded by dwellings. It gathered special significance in Scotland as a form which readily allowed speculators to achieve high densities with tall and continuous tenements following the perimeter of block sites, the so-called "hollow square" being all that was left in the middle. As unbuilt space, this square offered no return to the developer who accordingly schemed to make it as small as possible.

Glasgow had a particular stake in this form of development, for in attempting to discipline outward city growth the Corporation took wide powers in 1866, under a private improvement act¹, to lay down some thirty-nine new streets in the most densely crowded inner areas, (Figure 29); these it supplemented with two large suburban sites which provided serviced plots following a surveyed grid of blocks ideally suited to "hollow square" development. The town councillors were faced with a desperate and rapidly increasing need for accommodation to meet the labour demands of the insatiable new manufacturies. Their first priorities were to attract private developers to build on these sites, and to placate middle class ratepayers by keeping costs down; they could not afford to be too scrupulous in applying byelaw controls.

1. 29 Vict. Cap LXXXV. The Glasgow Improvements Act, 1866.



FIGURE 29 ::
 Details of the 1832 Parliamentary Boundary Commissioners Plan and the 1858 Ordinance Plan of Glasgow , showing the grid planning ideally suited to " hollow square " tenement block development .
 Between 1866 & the turn of the present century , the grid spread southward to engulf the necropolis at Hutcheson , and Pollockshields, westward to Partick & Dowanhill , and eastward as far as Dennistoun.

Such byelaw controls as were applied by the Dean of Guild Court derived largely from the 1862 and 1866 Glasgow Police Acts.² Residential development was defined as any building containing bedrooms, and the principal controls were directed to achieving adequate ventilation of bedrooms by providing a minimum amount of "free space" in front of bedroom windows. In new residential streets no building was to be higher than the width of the street, while in existing streets all new residential building was required to have a free air space equal to at least half the height of the building; this was later increased to three-quarters of the building height, while no free space at the rear of new houses was permitted to be less than thirty feet.

The street-width byelaw, like those of the Model Byelaws in the South, was simple enough to be effectively applied; the free space regulation was also effective for a time and brought benefit particularly in controlling back close infilling in existing built up areas. Before long however, a Court of Law upheld that the free space at rear, intended for the exclusive use of each dwelling, could be shared by other dwellings¹, for example, in opposite or corner situations; and on the strength of this ruling, the spirit of these byelaws was thereafter openly flouted by speculators intent on increasing densities at the expense of the so called "free space". Sheriff Clark in his report to the Corporation in 1877 observed that

1. Sheriff Clark: "Extracts from Report to the Corporation of Glasgow" 1877, Miscellaneous Prints, Vol 6, Glasgow City Archives, p 188-189

2. 25 & 26 Vict. cap cciv. et seq.

the intended free space had often been reduced by half.¹

It might seem remarkable that such an obvious looseness in the drafting of the byelaw should have been overlooked, but the Corporation was, after all, doing everything it could to avoid rate expenditure in housing provision, by encouraging private developers. As long as the city was at least seen to be nominally concerned with sanitary improvement through its own Police Acts, the Board of Supervision had no powers to intervene.² It was not until 1877 that the Corporation was moved by shame to amend and improve these defective byelaws by applying to the Sheriff Court for a Provisional Order

"to secure better ventilation, greater access of sunlight and more free space both in and about the blocks of buildings."

Sheriff Clark, in his report to the Corporation³, set out in detail the anomalies of the byelaws, and went on to comment as follows, on "hollow squares":

1. J.N. Tarn considered that what was commonly produced was a "dark hollow court thirty feet square, entirely surrounded by high tenement buildings." (Tarn J.N. "Housing in Liverpool and Glasgow, Town Planning Review Vol 39 No 4, January 1969; 332. This description however was usually only true of infill development in existing backlands, and not of the newly-gridded suburban sites.
2. Under Clause 3 of the Public Health (Scotland) Act 1867, 30 and 31 Vict cap 101. For all its title the Board exercised at that time only the most nominal supervision, having only three full time inspectors for the whole of Scotland. See evidence of the Dilke Commission Second Report, ... into the Housing of the Working Classes: Scotland P.P. 1884-85 Q 18371.
3. Sheriff Clark ibid; 188-9

"As to the external free space. It has of late years become common in Glasgow to erect tenements in the form of what is called "Hollow Squares", by which is meant squares or parallelograms entirely built round so that the corners are not left open to the sky, (Figure 30a)."

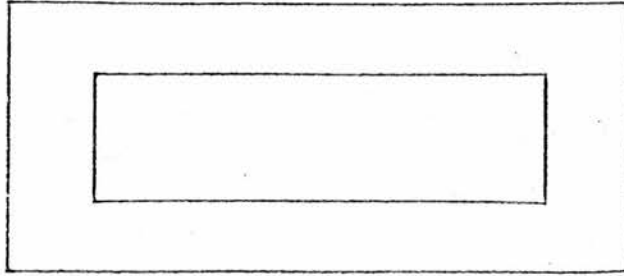


FIGURE 30a

"Now such squares are regarded as insanitary, and it is one main object of the Order to prevent their erection for the future, and as far as possible to do away with the worst characteristics of those already in existence, substituting in their place erections somewhat like the following, (Figure 30b)."

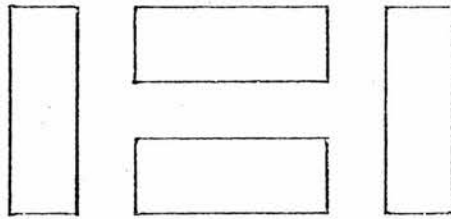


FIGURE 30b

"or else continuous streets or other styles of building through which light and air may freely pass....."

"I am satisfied that hollow squares are objectionable in a high degree, more especially when they are of a small size.... For health a certain amount not only of air but of sunshine, is absolutely required. But this cannot be secured in hollow squares, unless the houses are so low or the square is of so large dimensions as are not to be expected in practice."

The Association of Landlords, and the Association of House Factors in Glasgow reacted strongly against these proposals. The suppression of hollow squares was, in their opinion, unnecessary, and

"would lead to the erection of long streets without any

cross streets, and so to the formation of long tubes as objectionable as hollow squares¹"

(and a lot less profitable). And in the tail of their argument was the sting that rents would increase by up to £10 a year for a one apartment house, and that many tenants, unable to afford this, would be forced into the poorhouse and become a charge upon the rates.

The Glasgow Institute of Architects also submitted objections, but largely against the wide discretionary powers given the Dean of Guild, and in favour of a single building code for Scotland. They also included a curiously unenlightened proposal that within the space at rear of residential development

"it should be lawful to erect other buildings not occupied as dwellings, not exceeding sixteen feet in height and at a distance of not less than twenty-five feet from the back wall of a dwelling."²

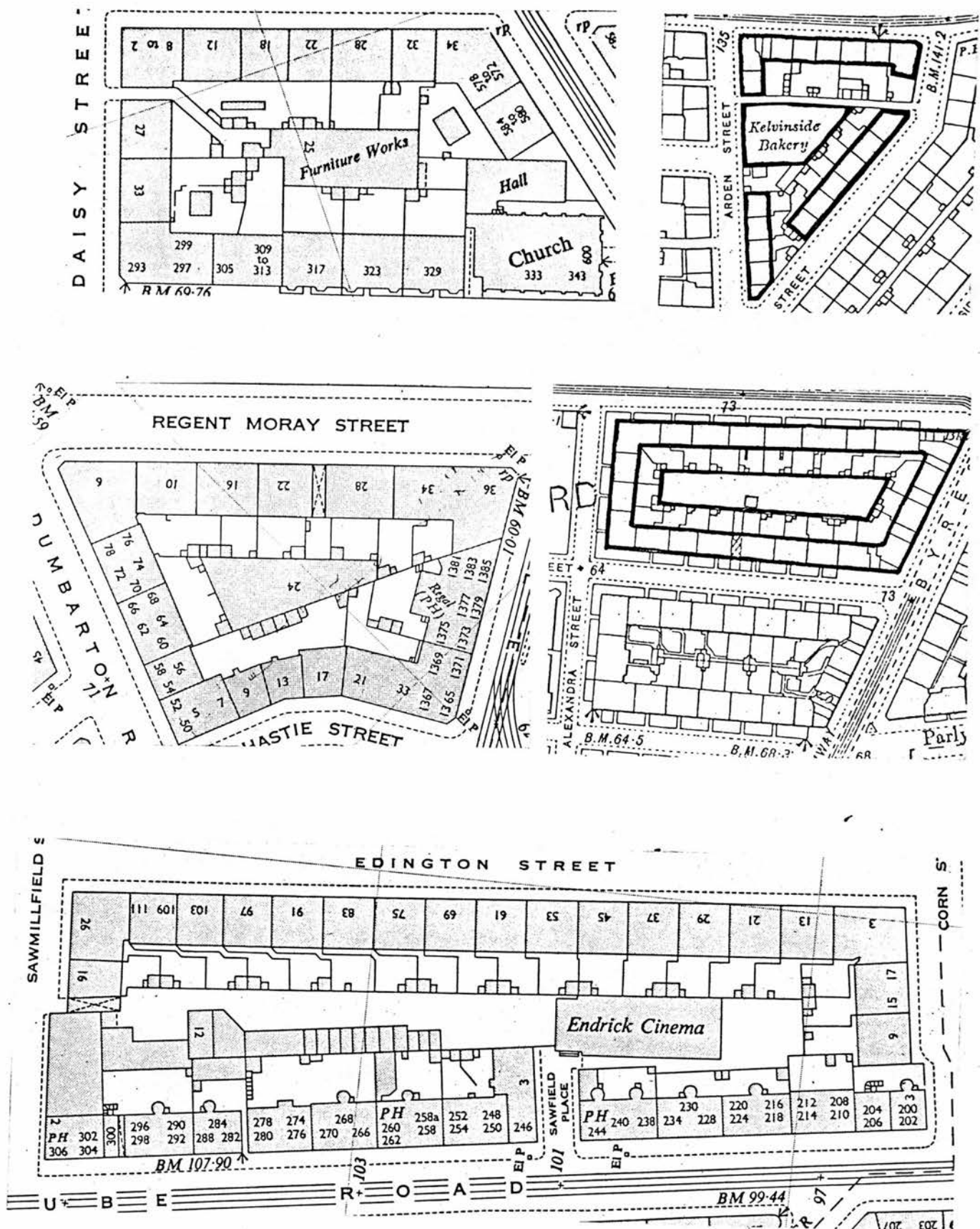
The Glasgow Building Regulations Act of 1892 shows how these matters were resolved.³ All new residential hollow squares were required to have a ventilation space fifteen feet wide breaking right through the building form from street to street, and no new

1. "Note of Objections stated by the Association of Landlords, and the Association of House Factors in Glasgow to the Provisional Order proposed by the Glasgow Police Board under the General Police and Improvement (Scotland) Act, 1862, in Amendment of the Glasgow Police Act 1866, as regards Building Regulations, before a Committee of the Glasgow Police Board upon 7th June 1878".
Glasgow City Archives, Miscellaneous Prints Vol. 6.
2. Letter from the Glasgow Institute of Architects containing objections against Proposed New Building Regulations". 11 June 1878.
3. Glasgow Building Regulations Act 1892 (55 and 56 Vict ch CCXXXIX) particularly sections 16-20, and 33.

building could be added to an existing hollow square unless this requirement was met to the satisfaction of the Dean of Guild. Large hollow squares were however exempted, provided their internal dimensions were at least 90 feet and their area 1800 square yards, or rather less in the case of only three storey building; and provided "the enclosed space is free of buildings other than the usual one storey wash houses and offices". The regulations further stipulated that the free space of three-quarters of the building height required under section 370 of the 1866 Act could not be shared, except in corner situations where ten feet width of through space was provided and kept open from a height of fifteen feet upwards. The least acceptable floor to ceiling heights and cubic content of dwellings were also closely specified.

These regulations were regarded by Robert Miller, Lord Dean of Guild in Edinburgh, as the most comprehensive in Scotland¹, but by 1892 much had already been built in Glasgow to far lower standards, and one has only to glance at the present Ordnance Sheets of the city centre, to find many instances of so-called offices, within hollow squares and backlands, which were and are anything but domestic in use; such space was typically occupied by a wide range of local trades and industries encroaching upon the hollow square

1. Miller R.: The Edinburgh Dean of Guild Court, Edin. 1896 pp. 76-77



backlands under the cover of "wash houses and offices", and in the absence of effective planning control. (Figure 31).

The local Government Board for Scotland sought to suppress many of these trades in housing areas by enlarging the powers of local authorities to deal with nuisance. By 1903 the Board's recommendations included restrictions on the nuisance of pigsties, tanneries, knackers yards, tripe boilers, tallow melters, gut cleaners and glue manufacturers¹.

Edinburgh and Glasgow adapted and incorporated these recommendations into their own byelaws, but while these at least helped to check fresh nuisance they did little to assist the removal of existing ones. The costs of compensating displaced trades were too high² and no grants or loans were available to local authorities for these purposes. The threat of direct intervention by the local authority to deal with nuisance, and the recovery of expenditure through the courts, was not only a cumbersome process, but one subsidised by the rates, and many of these nuisance-creators were substantial rate payers. Progress was therefore very slow and the hollow square continued to give generous sanctuary.

The opening up of hollow squares under the 1892 and similar legislation is well illustrated in the improvement work carried out

1. These regulations were issued by the local Government Board for Scotland, under the Public Health (Scotland) Act 1897, which repealed the earlier health legislation of 1867, 71, 75, 82 and 90, and which extended the legislation.

2. See for instance Edinburgh Corporation, Memorandum by Town Clerk as to the preparation of a Housing Programme for the Years 1934-38 Appendix A. 3.

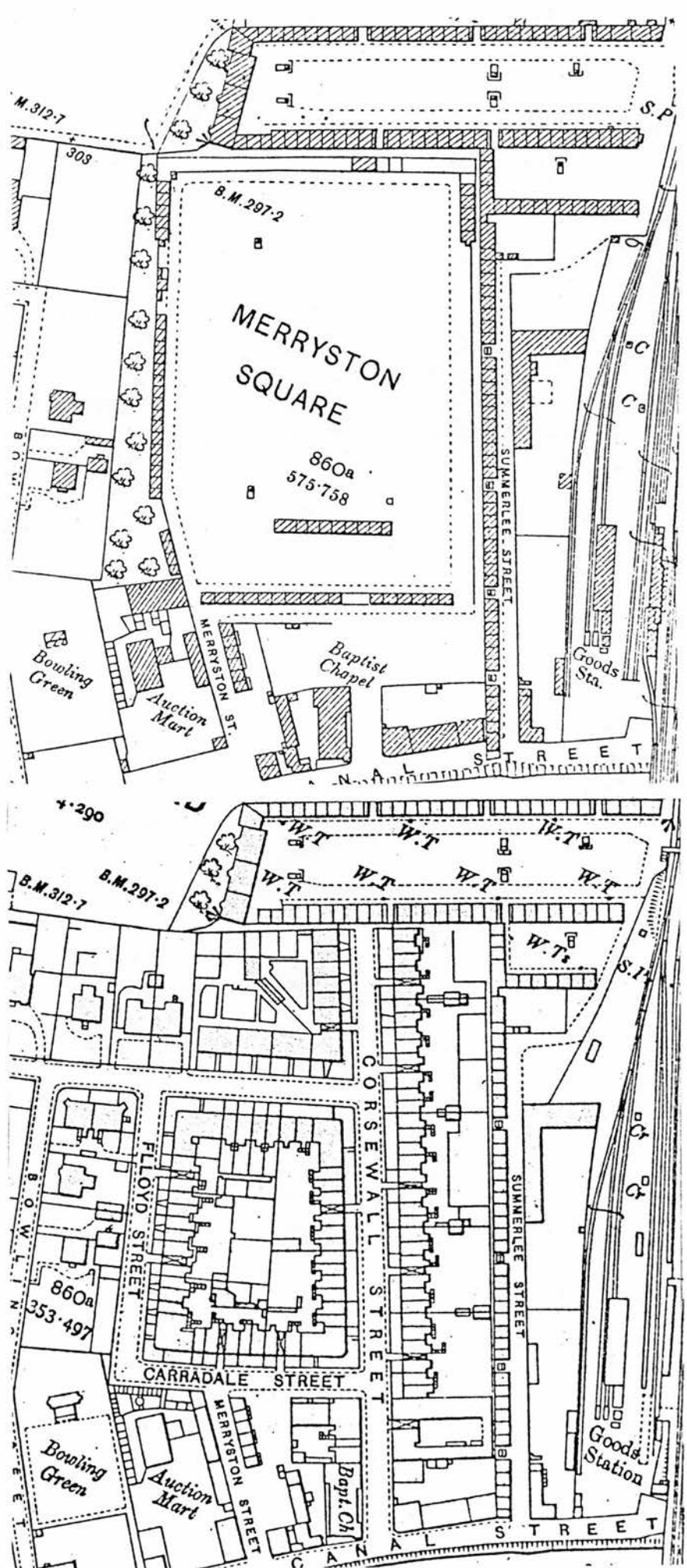


FIGURE 32b :

Not all local authorities followed Glasgow's example in dispensing with the closed hollow square; the above example showing the infill of Merryston Square, Coatbridge, with a typical hollow square was built between 1898 & 1913. (25" O.S. 1898 & 1913).

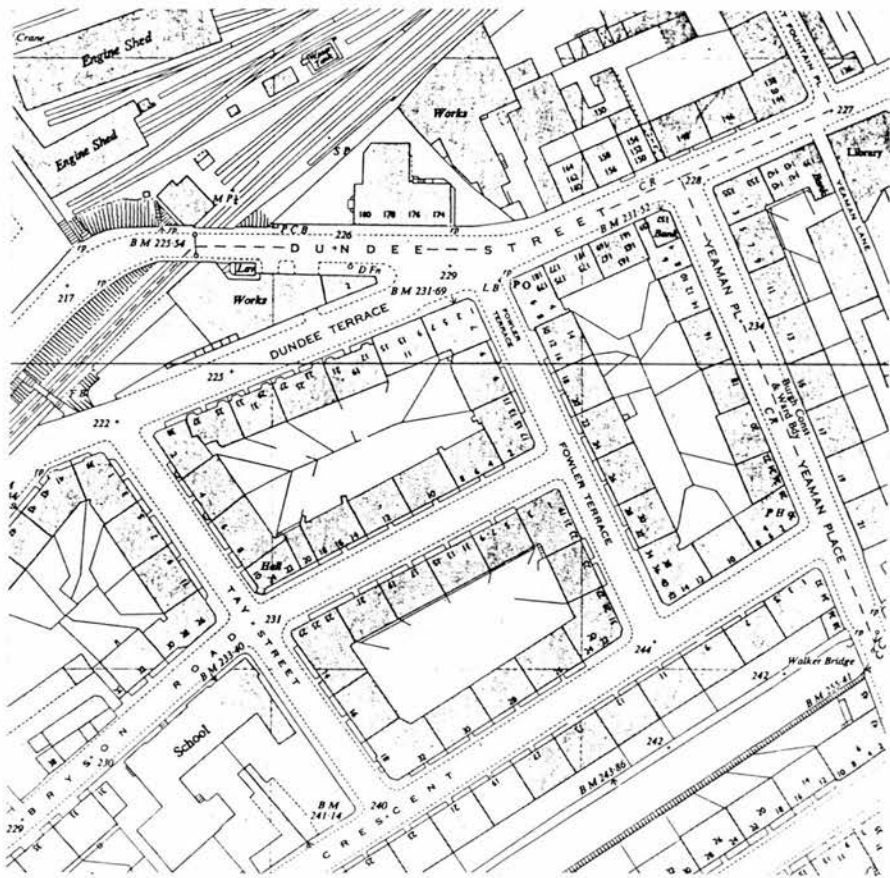
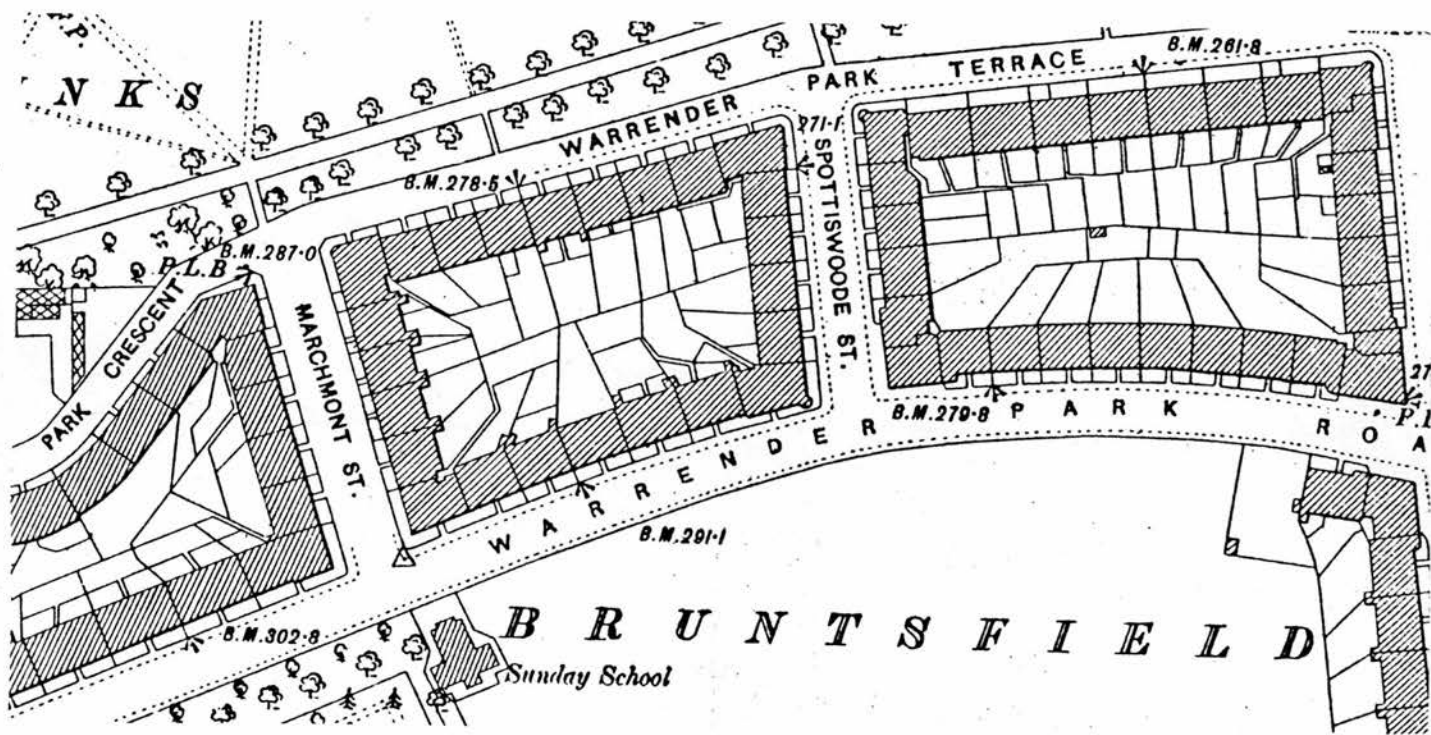


FIGURE 33 :
 Comparison of hollow square tenement blocks in Edinburgh ;
 (upper) built for the middleclasses during the 1890s , overlooking
 Brunt'sfield Links and to the generous dimensions of the new byelaws .
 (lower) built on the edge of crowded Dalry for the working classes
 during the 1880s and to the mean dimensions of the earlier byelaws .

in the burgh of Port Glasgow. Figure 32a shows the harbourside tenements area in 1897, notoriously overcrowded, insanitary and lacking in free air space. In 1901, the Medical Officer of Health represented to the Town Council that the area should be cleared and redeveloped as an insanitary Area, under Part 1 of the 1890 Housing of the Working Classes Act¹. This was accepted, and over the next decade the work of demolition and rebuilding was carried slowly forward, with generous financial assistance from the shipbuilder Lithgow. Figure 32a shows the completed development with streets of fifty to sixty feet width, and with ventilated shafts cut through the hollow square building form, closely following those specified by neighbouring Glasgow in her regulations of 1892.

Elsewhere, the larger-sized hollow squares called for in these regulations, became a common place, particularly in speculative tenements for the middle classes, in which developers could still find a reasonable level of profit. Those of the Warrender Park Estate in Edinburgh², were typical. (Figure 33).

1. Ferguson T. Scottish Social Welfare, 1864-1914, 1958 pp 141-2. (This was a rare instance of the 1890 Act being used in preference to private improvement legislation).
2. The relevant Edinburgh Legislation was Section 87(8) of the Edinburgh Improvement & Tramway Act, 1896; fifteen feet wide and high shafts were required in the opposite corners of all hollow squares of less than two thousand square yards in area, and with dimensions of less than forty yards in width.

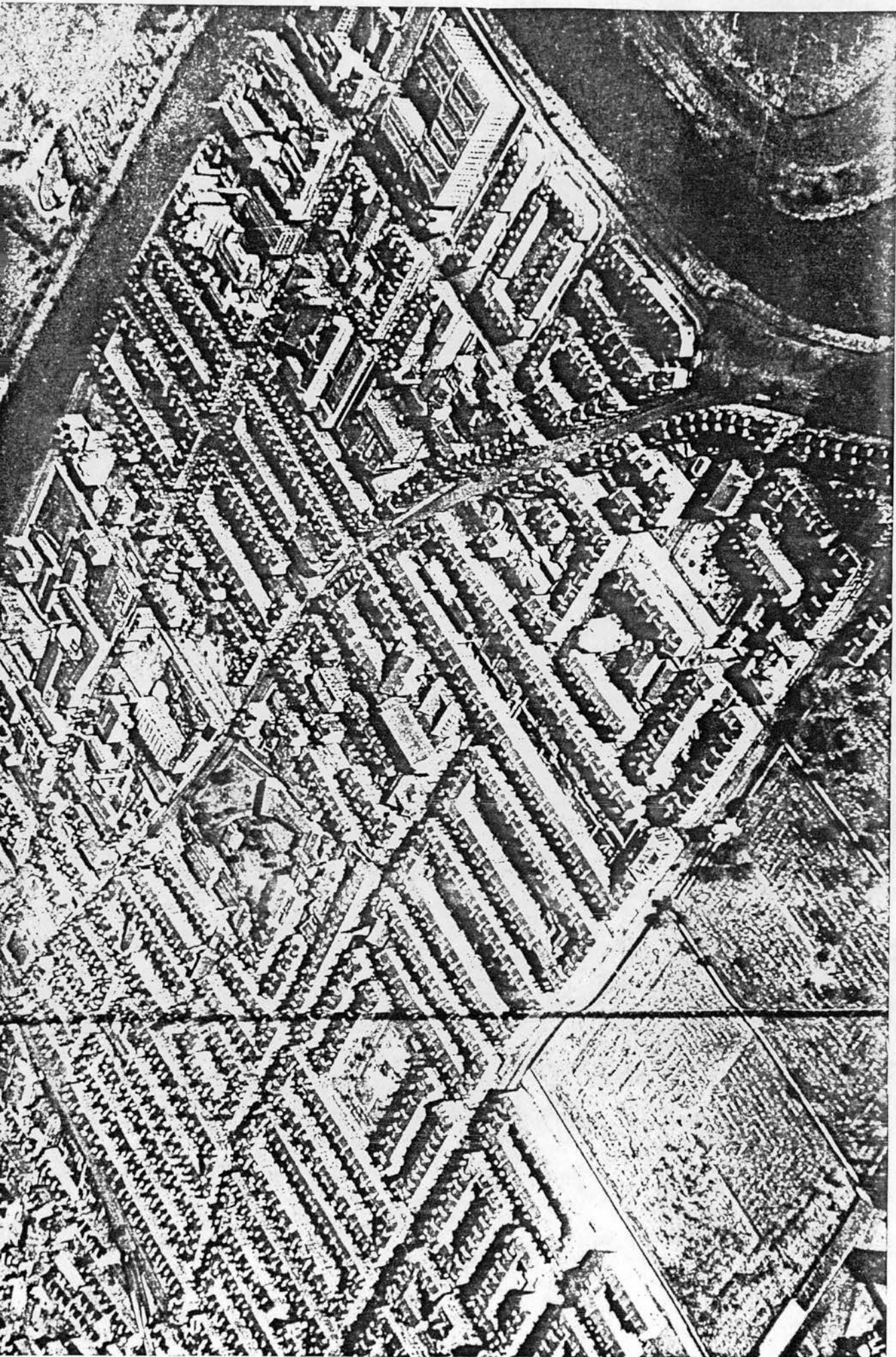


FIGURE 34 :

Aerial view of the hollow square landscape of Gorbals & Hutcheson ,
Glasgow ; Southern Necropolis in foreground .

Final vilification of the closed hollow square came in the Report of the Royal Commission on Scottish housing published in 1917.¹ Listed among its recommendations was a future restriction that "no tenement should be allowed in the form of hollow squares", and that "tenements should be arranged in blocks as separate or detached pavilions, so as to admit a sufficiency of light and air."² Here at last was government recognition for the view expressed forty years earlier by Sheriff Clark; but in that time the hollow square had stamped its image over much of the inner areas of Scottish towns and cities, (Figure 34).

Here also was the formula which was to have a profound influence on the form of post war Scottish local authority housing. It was made explicit in byelaws such as those for Edinburgh published in 1928. These gave absolute discretion to the Dean of Guild

"to decline to sanction buildings in hollow squares unless permanent provision (was) made for through ventilation by means of spaces at least fifteen feet wide which shall remain open and unbuilt upon from the height of fifteen feet upwards."

Free air space was to be maintained in front of all habitable rooms (not simply bedrooms), and it was no longer to be related to a distance from the rear wall but to a less easily disputed proportion of the total floor area of the dwelling³. Thus a new two storey

1. Report of the Royal Commissioner on the Housing of the Industrial Population of Scotland, Rural and Urban, Cd 8731 HMSO 1917; see also Clause 1526 on the previous dependence upon conditions of Feu to safeguard amenity and on the proposal that town planning schemes take over this function.

2. ibid: 71

3. This reulation may in fact be traced back to Section 50 of the Edinburgh Municipal & Police Amendment Act 1891, later amended by Section 34 (7) of the 1893 Act.

tenement required an open space maintained as a pertinent to it equal to the whole area of the building, with an extra fourth part of that area for every additional storey¹. Significantly, this space was reduced to three-quarters of the building area in the case of two storey detached houses. The Poorman's Garden Suburb had arrived, (Figure 98).

Increasingly from this time onwards the plan form of the broken hollow square became the mark of official housing. It may be seen in countless stereotyped estates on the outskirts of Scottish burghs and cities, and is even today still being used by large and influential development agencies like the Scottish Special Housing Association. In the close and densely overcrowded confines of Trongate in Glasgow the improved ventilation which such a plan form offered might certainly have seemed relevant, but when removed to the outlying open country of Drumchapel, Blackhill and Easterhouse , it had little meaning, except to point the obvious distinction between ventilation and draught.

1. City of Edinburgh Building Laws 1926, Edinburgh 1928, XV clause 9.

CHAPTER FOUR

TENEMENT, COTTAGE & SELF SUBSISTENCE

This chapter examines further the justification for providing open space around dwellings, and in particular, it looks at the different traditions of the Scots tenement & the English cottage. It demonstrates the underlying preference of both nations for a cottage with garden ground; and it concludes with a study of self-subsistence as a motive in the provision of local open space in housing.

THE TENEMENT BACKLAND



FIGURE 35 :

Part of Turgot's Plan of Paris , engraved by Bretez in 1739 , and showing the tall high density tenements , very similar to those of Edinburgh Old Town , and quite un-English in character.

Apart from obeying the dictates of ventilation byelaws, the broken hollow square, which became the stereotype of much Scottish local authority housing, was essentially the product of an unhappy marriage between the Scots tenement tradition and the cottage ideal of the English garden city. It became identified with a form of housing perhaps best described as "poor man's garden suburb". To understand something of this it is necessary here to go back to the beginnings of Scottish settlement, and to the development of the tenement; the marriage itself is later examined in Chapter 7.

The Scots tenement owes much to the method of working the land by runrig. The unit of settlement in lowland Scotland was not the manorial village as in England, but the smaller ferme toun. The typical ferme toun consisted of a cluster of cottages, byres and outbuildings surrounded by open fields of runrig, that is arable strips similar to English ridge and furrow, and extending out to common grazings. In the Highlands, until the sweeping changes of the eighteenth century, the land was worked by feudal tenure under the patriarchal Clan system, and the ferme toun had its counter part in the clachans or small groups of black houses, (Figure 40), from which the tenants farmed the land, again in strip or rig cultivation.

The relatively few large settlements that grew and diversified from these small beginnings were those which developed as market centres through trade privileges granted either by the local lord, as

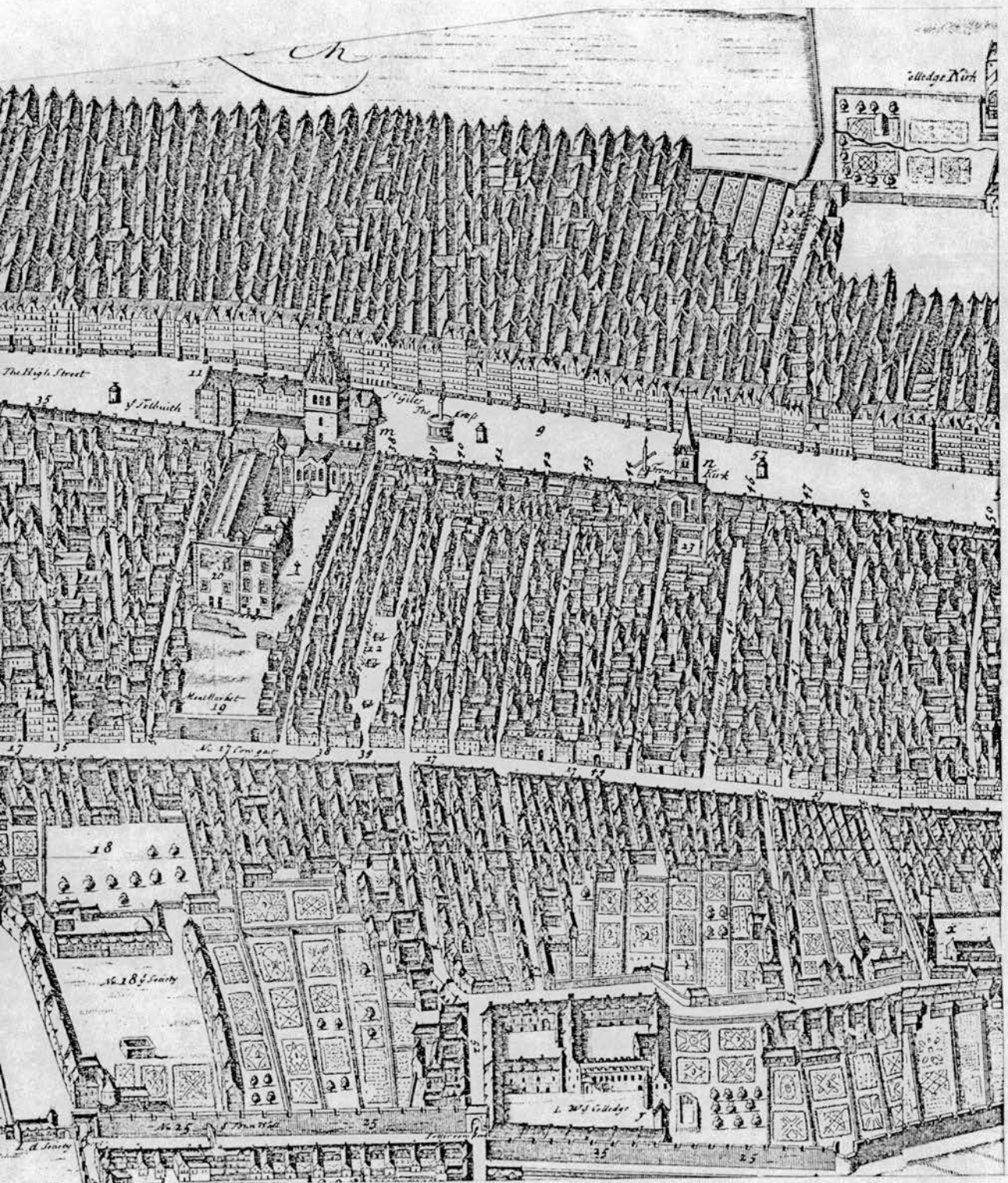


FIGURE 36 :
Part of Gordon of Rothiemay's map of Edinburgh engraved by De Wit c1647 and showing well the high, narrow and densely built-up tenement lands off the High St , and with a Gothic verticality akin to that of Paris in Figure 35 .

in the case of burghs of barony, or by the Crown in the case of royal burghs. The plan of Haddington, (Figure 38) shows a typical expanded ferme town, with its market and surrounding runrig.

The so called "backlands" of Scots urban settlements, and the pattern of enclosure, ownership and subdivision, tended to follow the line of the old runrig, extending from behind the frontage of the high streets. This may be seen very clearly in early plans of Edinburgh, (Figures 35, 36, 37) and towns like Elgin (Figure 38). Behind the houses fronting each side of the high street, the narrow riggs of the first settlers may be seen stretching back some of them as much as one hundred and fifty yards or more.

With growing prosperity and importance came a need for extended defences, and long before the Hanoverian peace, many of these prosperous mediaeval burghs, confined by their town walls, were faced with an acute land shortage. They were compelled to build upwards and over the narrow strips of garden ground, orchards and run rig, and the building forms developed as

Long narrow strips, extending in what was the natural direction of the growth of a house placed endwise to the street... like sections of geological stratification, with cracks or flaws in between (and with) parallel intervals left between tenements simply for convenience of access, only wide enough to permit two persons to pass, or perhaps a barrow or a cart. Each proprietor was bent on covering every inch of his grounds with his building, and the only function exercised by the Dean of Guild Court was that expressed in the phrase...

'to grant a lining' - that is, to see that if he built up to he should not build over the line of his building."¹

Clues to this additive infilling of backlands may be found in the derivation of the Scots words 'pend', 'vennel', 'wynd' and 'close'. 'Pen', meaning to coop up or confine, is derived from the old English pennian: applied to a backland area, as in 'Allan's Pen', it denoted a big close or passage; an ordinary close usually being only about five feet wide, but a 'pen close' being of extra width to allow the passage of a horse and cart. According to the Oxford English Dictionary 'pend' is an obsolete form of 'pen', and unrelated to 'pend' meaning to hang, derived from the latin pendere; although it may well have been used of backlands in the sense of 'to append'.

'Vennel' has a clearer etymology. In Scots it means narrow lane or passage, or occasionally an open drain; it derives from the old French, through the mediaeval latin venella, which is a diminutive form of vena meaning vein. It is commonly used as a synonym for 'wynd' from the old English gewind and meaning a narrow passage turning off a main thoroughfare. Similarly 'close' is used in Scots to denote an entry or passage off a street to dwellings and is from the latin clausum, a closed space or enclosure. And finally, to clinch its ancient connection with runrig, the term 'land' is a Scots dialect word meaning 'a strip in a field'.

1. Russell Dr. "On the immediate Results of the Operation of the Glasgow Improvement Trust"..., Proc. Phil. Soc. Glasgow IX 1873-5, p.214

The logic of this intricate building form, and its essential difference from English development, lay not in the conditions which prompted overcrowding, but in the annual fee or feu(dal) duty, which, under Scots law, the feudal superior of the ground could exact from a developer or those occupying the developed ground in perpetuity. The greater the number of dwellings that could be accommodated on a feuing property, the larger the feu likely to be charged, and the greater also the incentive to build up to and more than that number of dwellings, in order to reduce the share of feu duty paid by each householder and to give the developer a higher margin of profit.

Hence the typical backland tenement, devoid of any open space save for midden and wynd, towering to a height of at least six storeys, and at times even to fourteen storeys, a warren of one and two roomed dwellings with house addresses like "Bridegate, No. 20, backland, stair first left, three up, right lobby, door facing."¹; and with its health hazards, cramped inconvenience and inevitability as a way-of-life visited upon successive generations of urban poor.

As late as 1904, Edinburgh's Medical Officer of Health could report a lawnmarket tenement as including fifty-seven occupied dwellings, all except three being of only one room, and having a density of over six hundred to the acre.²

1. Russell Dr. "Address on Ticketed lodging houses," quoted by Best G. The Scottish Victorian City 1968, p. 349.

2. Ferguson T. Scottish Social Welfare 1864-1914, p. 140



FIGURE 37 :

Edgar's Plan of Edinburgh , 1742 ; there were 186 wynds & closes representing the built-up area enclosing the rigs & paths , many still the original rood size of the rigs , 450 feet by 25 feet . As trade & commerce displaced agriculture , these were encroached upon as described .

(see Cowan W. & Inglis H . " Early Views of Edinburgh " Scottish Geographical Magazine 35 , 1919 , pp 315-27 .)

But at their worst in parts of the Cowgate, and in Central Glasgow, tenement densities rose to upwards of a thousand to the acre, (Figure 29). Octavia Hill, visiting the Glasgow City Architect's office, saw drawings of narrow crevices between buildings only six to twelve inches wide. She commented...

"I saw there - what I have seldom or never seen in London - a perfect honeycomb or maze of buildings where to reach the wynd furthest from the street, one has to pass under archway after archway built under the houses, and leading from one squalid court to another. Some of these narrow tunnel-like passages appeared from the plans to have been many yards in length. The houses too were higher than is usual in London alleys, and the darkness and obscurity consequently greater."

If they were worse than the rookeries of St. Giles, in London - the infamous Tom-All-Alones of Bleak House, - then these tenements must indeed have been among the very worst slums in Britain.

One of the strongest opponents of the tenement was the Reverend Dr. James Begg, Minister of the Free Church of Newington, Edinburgh. He was an enthusiastic supporter of the Edinburgh Cooperative Building Company, and particularly of the cottage form of dwelling²; and in 1864 he promoted a competition for an essay on the subject "The working man's House." It was open "to all operatives in Edinburgh", and the winning essay by John Symington, a compositor,

1. Tarn, J. "Housing in Liverpool & Glasgow," Town Planning Review, XXXIX (January 1969) pp. 328-9.
2. It is ironic that for all his dislike of tenements, Begg should have given his name to a large block of tenements, only recently demolished at Abbeyhill.

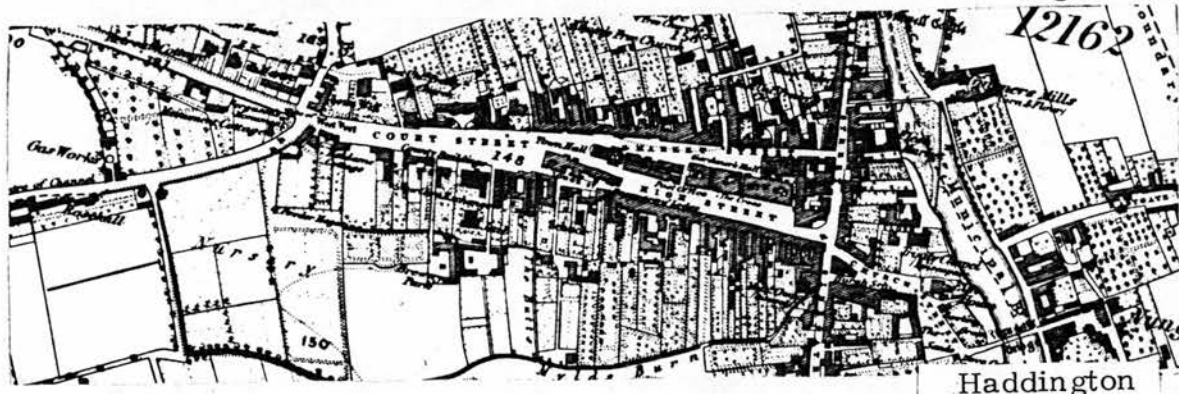
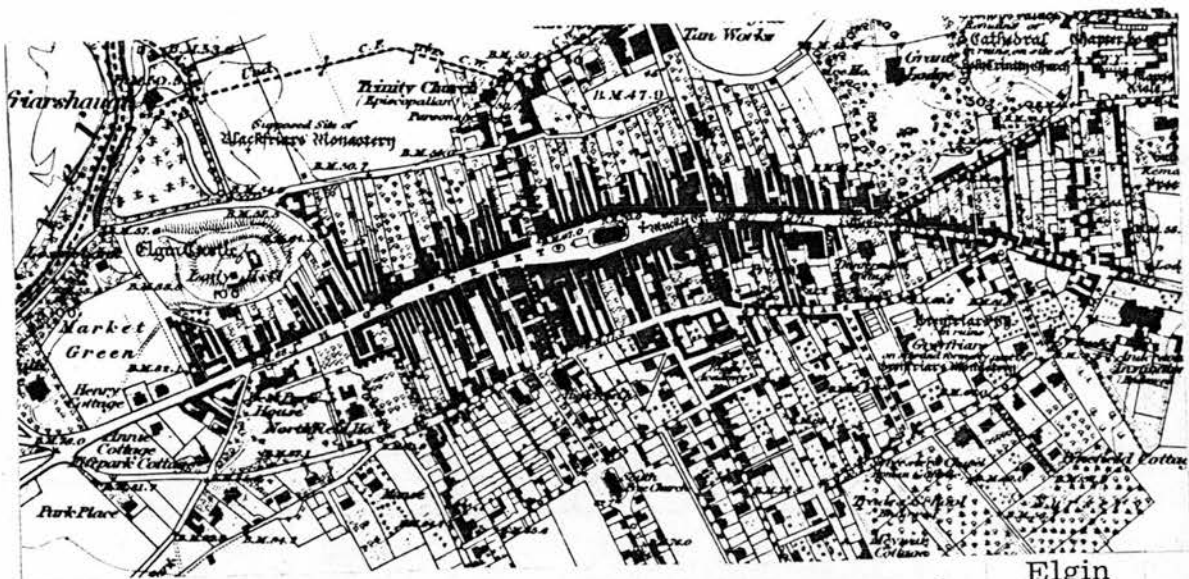


FIGURE 38 :

The centres of old Scots market towns , showing the influence of the narrow rigs upon the pattern of development .

6" O.S. First Edition .

was published in Begg's Happy Homes for Working Men in 1866.¹

In it, as one might have expected, Symington refers to tenements, as

"perpendicular villages... lent enchantment only by distance",

and he states a firm preference for houses

"on the cottage or self-contained principle."²

Fundamental to this self-contained principle was the idea of working men owning their dwelling by cooperative activity, and for Begg and his followers this was most easily achieved by physically independent cottages in the English manner; each with two storeys and where a family

"has access at the back to a yard, garden or green which belongs entirely to themselves."

Symington attached particular importance to giving every working man a garden with his dwelling. He referred to the cheerful appearance of English cottages

"with the honeysuckle, the jasmine or the lovely rose tree encircling their doors and windows"

and he quoted his fellow Scot, Chambers, on the gardens of Birmingham where

"vegetables and flowers are cultivated, clothes hung out to dry, and children amuse themselves in the fresh air. The artisans have long been noted for their love of gardens. Where they used to spend long hours in the summer evenings and much of their leisure on holidays...."

1. Symington J. "The Working Man's Home" 1864 in Happy Homes for Working Men, Edinburgh 1866.

2. ibid pp. 157 ff.

In Edinburgh Symington noted the small beginnings of a cottage tradition, in the fishermen's rows at Newhaven, the Colonies at Stockbridge, and at Pilrig Buildings (Figures 42 and 26), although he considered the latter compromised by not being owned by their occupants. Had he also looked more closely at the living conditions of other Scottish cottages he might have been less enthusiastic. Many fishing and mining communities still lived in appalling conditions, with cold wet house floors below ground level, innocent of piped water and sanitation, and with filthy bug-infested bedding.¹

Begg called for legislation to release land from entail, and from those owners who feared loss of amenity, in order to build low density working men's estates to allow the rack-rented tenement dweller to achieve the dignity of cottage owner-occupation, and to claim his political rights.²

Begg's colleague H. G. Reid of the Edinburgh cooperative Building Society also fiercely criticised the grandiose plans for extending the new town, and the feuing conditions over this land restricting the building of working class housing. He commented that

"it is intolerable that plans - many of which will never, and most of which need never, be carried out - should stand like an army round the city, and drive back the poor inhabitants, who

1. refer to the evidence of Royal Commission 1885 op cit.

2. the so-called "forty shilling franchise".

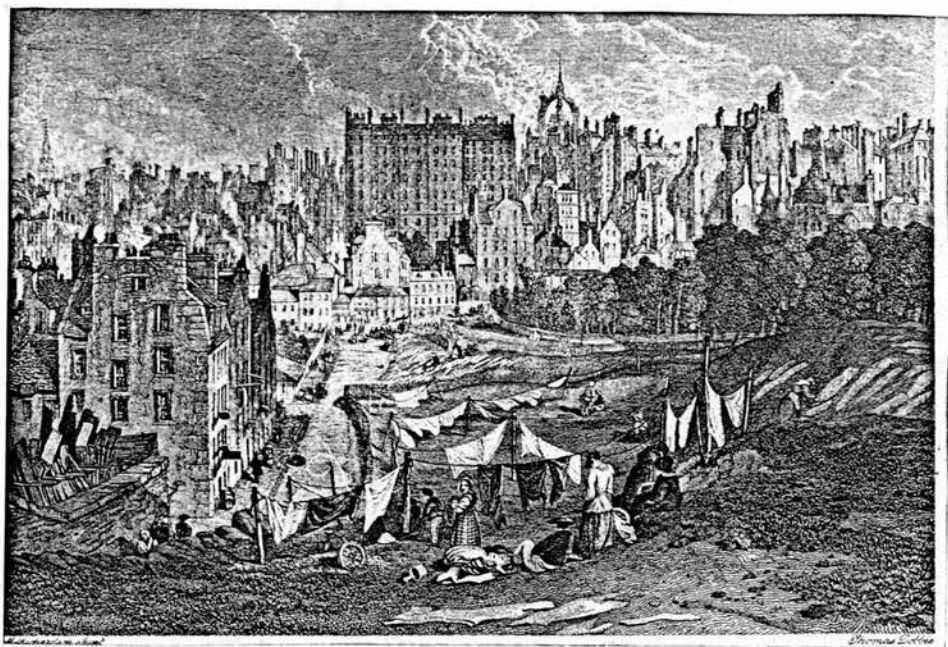


FIGURE 39 :
Site of East Princes St Gardens . One of the few central open
spaces in Edinburgh where the housewives of the densely
overcrowded Old Town could spread their washing , and in full
view from the fashionable New Town .
(View by Dobbie , published by A&C Black , 1841 .) .

desire to possess homes of ordinary comfort and airiness to dens of festering filth and pollution..."¹

But the squalor of Scottish housing was seldom as acute as in Leeds, Manchester or the other great midland manufacturies. Even the worst tenements of Cowgate and Stockwell Street were within a few minutes walk of Holyrood Park and Glasgow Green; the main arguments for open space improvements in Scottish cities therefore continued to rest upon improved hygiene by better ventilation, rather than upon recreational need.

Except for the street, all the open space usually provided about a tenement land was its close. The close, if large enough, was by tradition formed into a bleaching green for the airing and drying of clothes. But, with progressive encroachment and overcrowding, most degenerated as described into middens and muckheaps, and women were compelled to carry their washing a distance and spread it where they could in East Princes Street Gardens, on Calton Hill, and other such public spaces within reach of the crowded centres (Figure 39).

Dr. Robert Foulis, who carried out an early rehabilitation project on the notorious Hattersland Tenement in the Grassmarket,² found the close being used as a byre;³ this he removed and put

1. Reid H. G. "The Edinburgh Co-operative Building Company" Transactions of the National Assoc. for the Promotion of Social Science. Edinburgh 1863 p.630.

2. Foulis R. Old Houses in Edinburgh and their inhabitants, as they are and might be; with the result of an Experiment towards their improvement. Edinburgh 1852 pp.8-9.

3. the keeping of cows in tenement basements off closes, to meet the demand for milk, was extremely common and greatly contributed to the incidence of tuberculosis.

down instead a bleaching green

"covered with nine or ten inches of good Protestant black earth carted from the excavations... at John Knox's corner."

He ejected the previous tenants, cleaned out the interior and installed nine families, and at ground level fitted out a non-alcoholic grocer's shop, a working man's coffee shop and a model lodging house.

There were many closes in Edinburgh's old town where he felt "such remedies could be carried into effect... The mere ejection of the present inmates, and white washing the walls would entice a better class of tenant There are numbers of vacant spaces in these closes, at present filled up with the debris of old houses, which could at trifling expense, be converted into bleaching greens for clothes, and the measure, along with cleaning the houses, would at once draw respectable occupants."

~~But it was not until the very end of the century, after long years of~~
patient cajoling by the Medical Officer of Health, that the provision of local authority services of water supply, sanitation and street cleansing reached a standard which allowed these spaces to become anything other than tips.¹

Patrick Geddes was the man most instrumental in bringing this about. In 1887 he and his wife very deliberately settled in St. James Court, one of these slum tenements, in order to practice his ideas on civic improvement, and to draw attention to the

1. Many of them, even today, are little improved; see Edinburgh News, Thursday October 25, 1975.

wretched living conditions of Edinburgh's poor. Among the many projects he promoted, was one intended to reclaim derelict tenement closes, and convert them into small town gardens using voluntary labour, and inspired by much the same ideas as Octavia Hill in London.

In a survey of the old town he identified a total of seventy five such spaces, covering ten acres. By 1911 he was able to report that

"ten or a dozen of these have already been reclaimed within the past two or three years into gardens, accessible to school and street children, and to women, to the people generally, whilst others are in preparation as circumstances and scanty funds allow...."¹

At least some of this work appears to have been carried out in conjunction with the Corporation, during the clearances of closes made under the 1890 Housing Act, but the results were limited.²

Except for Ramsay Gardens itself- the close which he rehabilitated and next to which he lived - most of Geddes's work has vanished. But as late as 1930, the Parks Department appeared to be still maintaining a number of these "garden enclosures".

A guide to Edinburgh at that time noted that

"certain private and semi-private bodies have acquired old derelict building sites and converted them into pretty little rock gardens; being mostly in poorer districts, they help to relieve the monotony of drab surrounds."³

1. Geddes, P. The Civic Survey of Edinburgh, 1911 Edinburgh p.566.
2. McCrae, Notes on the Rehousing of the Dispossessed in Edinburgh.
3. Bruce, A. Edinburgh's Open Spaces, 1930 p.20

One hopes that the enthusiasm of Geddes the botanist had not encouraged such misguided enterprises. Like most of the windmills at which he tilted, the results of this project were only a token match of his expectations.

But Geddes and other passionate opponents of the tenement, saw the real answer to the inadequacies of the closes in a complete change of habit, and in the adoption by the Scottish urban labourer of the cottage mode of living. Others recognised that this could never provide cheap enough accommodation to be practicable, and they sought instead for new ways of improving tenement life.

Among them was Lewis André, an enthusiast of roof gardens. In 1863 he read a paper on this subject in Edinburgh to the Scottish Annual Meeting of the National Association for the Promotion of Social Sciences¹; Chambers and Begg were among those attending, and papers were also given by Florence Nightingale and Sir Edwin Chadwick.

André stated that he had prepared designs showing how the roofs of working class tenements, particularly in close-packed lanes and streets, could be used as "airing grounds."² These were to occupy about three-quarters of the roof area: they were to be open to the sky and set back from sight at street level.

1. André, L. : Summary of paper given, Sat. 10 Oct. 1863 in the Proceedings of the Public Health Department, Transactions of the National Association for the Promotion of Social Science, Edinburgh 1863.
2. Similar proposals had been made in London from time to time, one of the earliest uses of roof playgrounds and drying areas being in Henry Derbyshire's Columbia Square tenements (1859-62), for Angela Burdett-Coutts.

Each was to be screened from chimney down-draughts, and protected with a stout safety railing which allowed full circulation of air, and emergency fire access to adjoining roofs. André described his airing-grounds as providing space

"in which the inhabitants of the house can take the air and follow out of door pursuits, and in which children can engage in gymnastic exercises and games free from the crowds of the streets and the damp and unwholesome atmosphere of back gardens, yards or areas."

They were also to have rooms directly adjoining them, so that

"parents can watch their children while they themselves continue at their work."

André's ideas were hardly original, but they served as a well-judged reminder of unexploited possibilities, and just at a time when Chambers was stirring into life his great improvements scheme for the Old Town. Among the improvements to be carried out were - number of new tenements which included roof airing grounds very much as André had recommended.¹

The merits of tenement planning received unexpectedly strong support in 1917 from the town clerk of Glasgow.² In a report to the Corporation on housing and general town improvement he stated his conviction that where population exceeded a certain density, the tenement was inevitable and that

1. those in Jeffrey St. are a good example.

2. Letter to the Corporation from The Town Clerk of Glasgow and extracts from The Glasgow Herald
Corporation of Glasgow. Glasgow 1917 pp.8-9.

"a good tenement is infinitely better in every way than overcrowded and subdivided houses masking "cottages" or "mansions".

The town tenement was, he argued, hardly a necessary evil, as many of the better class tenements in Glasgow were let at rents as high as those of villas; but the Corporation should beware in future of repeating the mistakes of the worse kinds of tenement, too closely massed, monotonous and drab, deficient in air, and with a predominance of one and two apartment dwellings. He proposed instead, tenements

"in spacious settings, with abundance of light and air and accessories for social pleasure and recreation",

and with

"no long closes, winding stairs or gloomy lobbies."

As part of this new tenement image the idea of the roof airing-ground was resurrected.¹ If inner area housing at Cowcaddens and Garngad could not expect to have flower plots in front and cabbages behind, it might at least have roof gardens.

"It is in contemplation to make the tenements flat-roofed, and on the roofs grass may grow and flowers bloom. The idea is feasible and may fructify in the transformation of Cowcaddens and Garngad into something like an aerial garden city. A cowcaddens citizen in the not remote future, like some happier Teufelsdröckh, may from the floral perch of his roof garden high above the roar of the streets, contemplate human affairs with a kindlier philosophy."¹

This sadly was to remain a visionary flight of fancy for today all that

1. "Glasgow Housing: Anticipations,"
Glasgow Herald No. 72, Saturday March 24 1917 p.5

is left of Cowcaddens looks up at an elevated six lane inner ring road. Only in the outer suburbs did the garden city reach Glasgow, and except for a brief flirtation with the English cottage, it remained true to the Scots tenement; but it fell far short of the enthusiastic prescription of the Town Clerk,

THE COTTAGE GARDEN



FIGURE 40 :
Primitive Scottish cottages ; (top) a typical Highland clachan at
Loch Duich , & (bottom) black houses . c1875-80 .

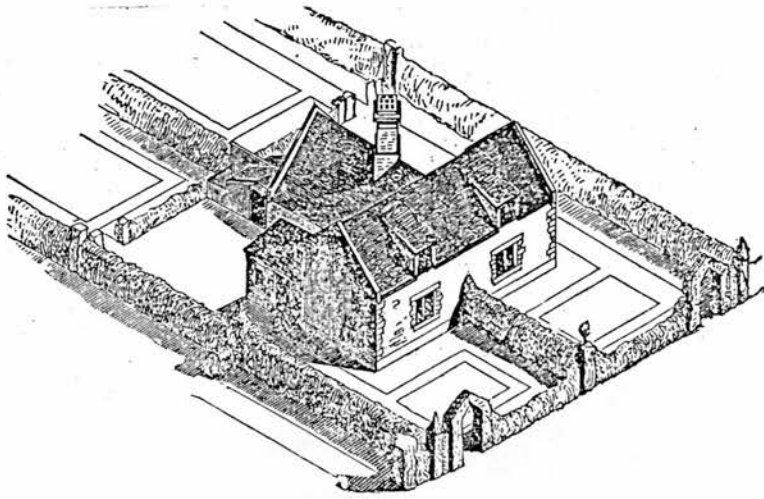
Dr Johnson in his dictionary defined a cottage as a hut or mean habitation,¹ but to many concerned with housing improvement during the nineteenth century it became a symbol for the dignity of the labouring man, and its plot of land the means by which both urban and rural poverty might be overcome. As a symbol, it stood not for the squalid hovels described in the early Statistical Accounts,² but for the model estate cottages built by the great landowners in their farm and village improvements, and inspired by the rivalries of agricultural betterment. And, as we have seen, their proponents in the Scottish cities, like Dr Begg, looked to England for their example.

Dr Johnson might be forgiven his description of a cottage, for there were few enough of the improved kind in Scotland at the time of his visit; and the so called "black houses" of the Highlands were little more than low smokey one-roomed huts, with a beaten floor, windowless dry stone walls and a turf roof on spars and with a smoke hole, (Figure 40). Cottages they may have been, but they were among the worst and also the most overcrowded housing in the whole of Britain; the 1861 Census showed that Caithness and Orkney had a room occupancy rate equal to that of Glasgow³ and in Shetland the position was worse. It should not be forgotten that for

1. Johnson Dr. S. A Dictionary of the English Language London 1775.

2. Sinclair Sir J. The Statistical Account of Scotland, Edinburgh 1779, vols. iii 350, xix 595, v 417.

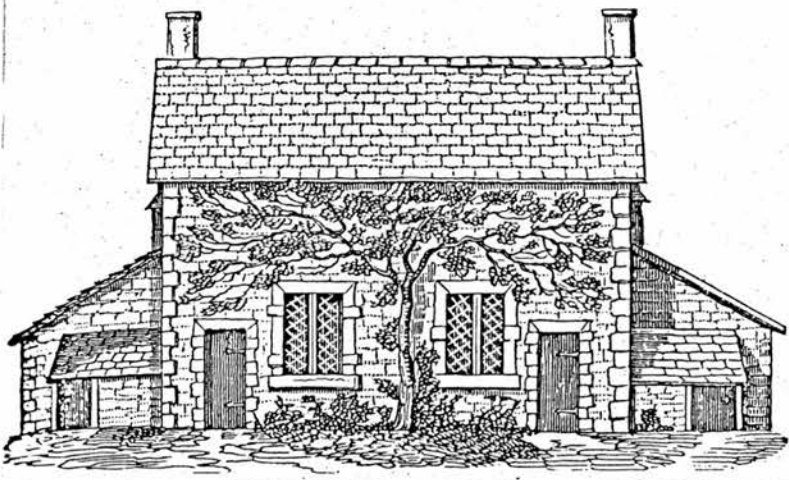
3. two persons per room, and on Shetland three persons.



A : a pair of cottages for mechanics with seven foot hedges and with allotments attached to the back yards .



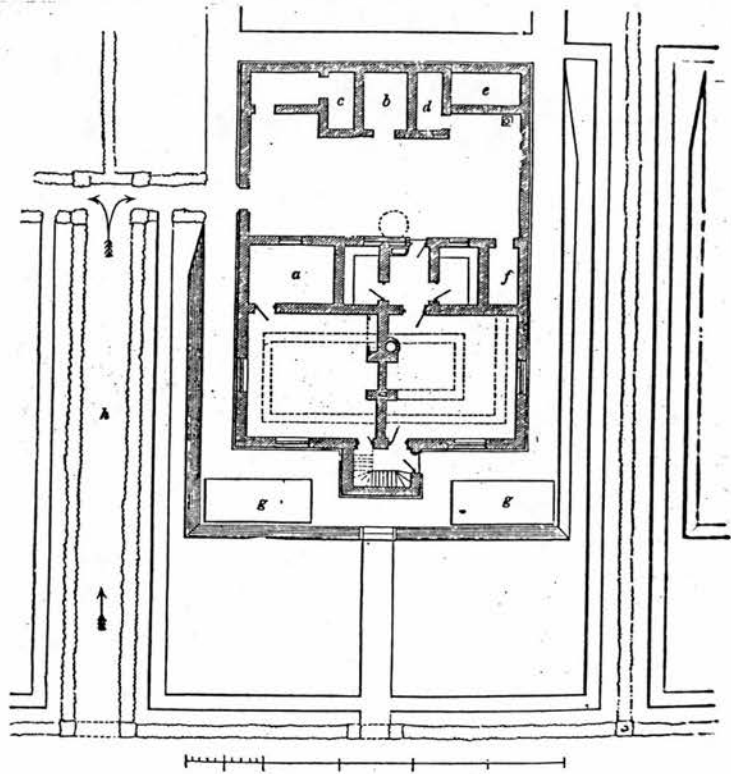
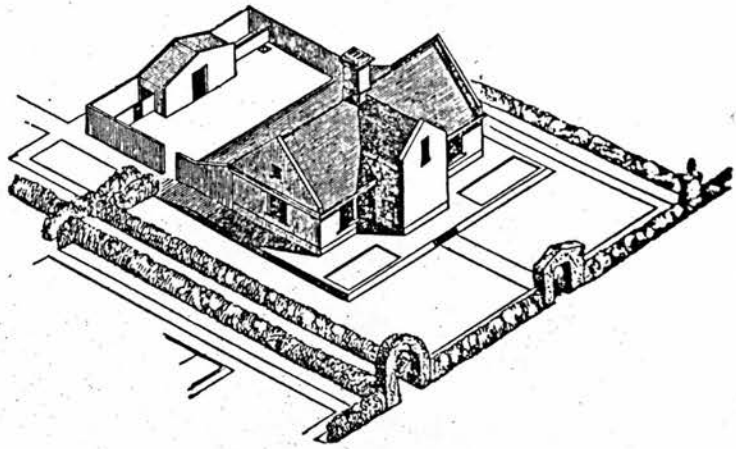
B : an old farmhouse converted into a double cottage for two ploughmen .



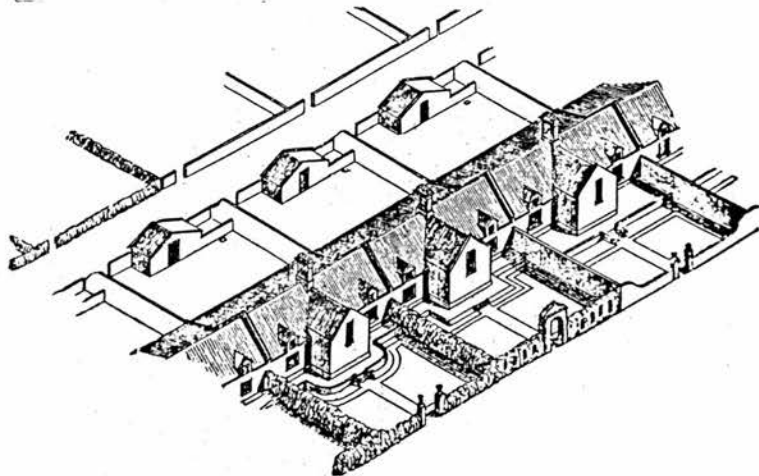
C : a pair of cottages in Gloucester let to farm workers at 1/- week each .

FIGURE 41a :

Improved cottages for farm labourers illustrated by J. C. Loudon in his Cottage , Farm & Villa Architecture ; the cottage shown in A was illustrated by Chadwick in his 1842 Report .



A : agriculturalist's model cottage
with large front garden , & backyard
with cow house , pigsty & poultry house.



The same design as A, in rows . Loudon
disliked the relative lack of privacy
between gardens. Note also the need for
separate access to rear allotments .

FIGURE 41b :
Improved cottages for farm labourers illustrated by J. C. Loudon.

many a displaced Highlander, the tenement one room and kitchen, rack rented from a city speculator, often represented an actual rise in living standards.

Not until the end of the eighteenth century did "white houses" begin to appear; constructed of solid masonry, roofed with slate, clean, neat and comfortable, with a separate kitchen and with the animals banished outside to the cowstall and pigsty at one side. These were the kind of dwellings J. C. Loudon sought to persuade the lairds to build for their tenantry, (Figure 41) and it was on this foundation that Cobbett desired to build a new generation of British yeomen.

The fundamental advantage of a cottage was its garden. Loudon, while applauding Chadwick's Report to the Poor Law Commissioners, rounded on him for omitting to show how the improved cottages he illustrated were related to their gardens, and for underestimating their importance. He made amends for this himself in his own Cottage Farm and Villa Architecture and demonstrated in detail how Cobbett's ideal of self-sufficiency could be achieved by the industrious artisan.¹

Although he advocated parallelogram worker colonies, Loudon seems to have doubted the advantages of cooperation even among cottagers. He observed that although

"a congregation of cottages as admitsof the families associating together at pleasure is desirable, it

1. Loudon J. C. Cottage Farm and Villa Architecture 1842 see p. 1140

ought not... to be carried so far as to compel any two families to come constantly in contact... For this reason we would as seldom as possible join a row of cottages like the houses of a street, but rather isolate each by surrounding it with a garden."¹

He recommended seven foot hedges between gardens.

Each cottager within his garden, Cobbett saw as master of his small domain, self-sufficient in a world of rising unemployment, inflation, unjust taxation, food scarcity and pauperism; brewing his own beer, baking bread, keeping a pig and poultry, and on a quarter of an acre, growing much of the vegetables and fruit needed by his family.

"Is it not, "

he asked in his Cottage Economy of 1821,

"much more rational for parents to be employed in teaching their children how to cultivate a garden, to feed and rear animals, to make bread, beer, bacon, butter and cheese, and to be able to do these things for themselves, or for others, than to leave them to prowl about the lanes and commons, or to mope at the heels of some crafty... saint, who while he extracts the last penny from their pockets... promises them... everlasting glory in the world to come."²

Cobbett had no time for those evangelists who saw the evils of society as the Will of God.

"A couple of flitches of bacon"

he observed caustically,

"are worth fifty thousand methodist sermons and religious tracts, "

1. Loudon, J.C. ibid p.1139

2. Cobbett W. Cottage Economy 1821 quoted by Pemberton W. in William Cobbett 1949



FIGURE 42 :
Fishermen's houses in New Lane , Newhaven , Edinburgh .
The kind of improved dwelling preferred by Dr Begg & his
friends , to tenements .

and he strove vigorously in his pamphlets, books and political broadsheets, to inculcate among the labouring poor the same spirit of self-help which motivated his own life. The staple of that life was "good air"

and

"good and plentiful and plain food,"¹

and for him these were best provided for the working man by a cottage garden. They were certainly not to be found in the cramped quarters of a speculative tenement.

Cobbett would have agreed heartily with the following nostalgic sentiments expressed by a correspondent of Robert Marnock's Floricultural Magazine:²

"Within the memory of many individuals, most of the great manufacturing towns have nearly doubled their population; but the opportunities of rural recreation have decreased in almost the same ratio, and (to me) that most delightful of sights, cottage gardens, bid fair to disappear altogether. Here a rural walk, and there a lot of cottage gardens, disappear in succession, without any opportunity of supplying their place but at an increased distance from the town. It is, therefore, much to be lamented that children should thus, in many instances, grow up into manhood without the possibility of acquiring those tastes for Horticultural and Floricultural occupations, which so greatly distinguished their fathers and grandfathers."

1. Cobbett W. "Advice to a Father" in Advice to Young Men etc. London 1842 pp.223-8
2. Marnock R. Floricultural Magazine Vol. 1 1936 pp.153-4.

And yet at that very time, cottage floriculture was enjoying an unprecedented popularity, with local florist societies cultivating and exchanging new varieties, combining to purchase others, holding competitions and promoting cultural knowledge with a passion and enthusiasm caught by Thomas Hogg in his Treatise On The Carnation in 1839:

"The thorough-bred florist, who derives pleasure from pursuit, and who has always the flower fever strong upon him; who has rivals to contend with; who is incited by the love of fame, and the hope of winning the first splendid prize at some exhibition: who will walk fifty miles to catch a glimpse of some new celebrated flower, and who, if it meets his fancy, will sooner pawn the coat off his back, than not obtain it; who will leave his warm and comfortable bed at midnight, to rise and destroy the cursed earwigs that shall dare to attack his favourite blossom; will begrudge no labour, and neglect no pains....."

(6th edit. pp 26-27)

Here then, in cottage Floriculture, was the artisan's Furor Hortensis, and in Scotland it was nowhere more vigorously pursued than in the gardens of the Paisley weavers. Paisley's prosperity had grown with the expansion of the textile industry after the Union, firstly in the imitation of Dutch thread, French cambric and London silk gauze, but especially in the years following 1790, with the world market it established for high grade hand-embroidered cotton "Paisley Shawls". By 1831 Paisley was the fourth largest burgh in Scotland and was estimated to have upwards of half its population of 57,000 in the weaving trade; very many of them women and children, and with many more from surrounding rural areas doing piece work to supplement their household income.



FIGURE 43 :

Laced pinks of the kind the Paisley weavers were famous for ;
Hogg in his Treatise on the Carnation , (6th ed) 1839 , noted
over one hundred & fifty varieties of crimson & scarlet bizarres
similar to those above , illustrated by Harrison in Vol 1 of
The Floricultural Cabinet , 1833 .

During this period, up to the late 1830's, the weavers prospered, and they were drawn to Paisley in increasing numbers from outlying crofts to forsake their former agricultural life entirely for the handloom.

"Four days did the weaver work, for then four days was a week, and such a week to a skilled workman brought forty shillings."¹

With this leisure and prosperity the cottagers were lifted above subsistence and had ample time to indulge in floriculture. In 1782 they founded one of the most famous and long-lived of all florist societies.

The Paisley Florist Society met every week and held competitions for whichever exhibition flower was in season. Prize money was little inducement, for at the end of a year the member with most wins received a spade, and the runners-up a fork and a rake. Like Cobbett and Marnock, J. C. Loudon saw in such activities the true traditions of an artisan culture, based on the soil of the cottage garden. He commented with approval that the Paisley weavers'

"ingenuity is continually in exertion for new and pleasing elegancies to diversify their fabrics; and where such habits obtain, the rearing of beautiful flowers will easily be adopted. On the other hand, the rearing of flowers must tend to improve the genius for invention in elegant fancy muslins."² (Figure 43)

The weavers produced men who excelled in many walks of life, but particularly in botany, ornithology, engraving and acting, and it

1. Smout, T. pp.392-3.

2. Loudon, J. C. Encyclopaedia of Gardening 1824 London p.1089

was commonly said that every third man in Paisley was a poet.¹

But to this, the devotee of the tenement would probably have responded, by listing the great men of Scotland born and bred in a single end off a common stair. It would also be quite wrong to suppose that Paisley was purely a cottage community; by the time of the 1861 Census it was among the most overcrowded towns in Scotland, having an average of more than two people to a room, and many families in the town itself living in tenements; but by then Paisley had long been broken by depression and the machine.²

Floriculture was of course of secondary importance to the opportunity a garden gave for cultivating vegetables and fruit. The practical-minded Patrick Neill, Secretary of the Caledonian Horticultural Society, in 1817 wrote of Scottish cottage gardens that

"the healthy kale and cabbage plants, and other useful pot herbs, with well earthed rows of early potatoes, shew that the inhabitants understand the management of their little plots, and how to draw from them the most effectual assistance to their families."³

To do this adequately, J. C. Loudon calculated that the cottager needed from one sixth to one eighth of an acre;

A greater space than the sixth of an acre, a labourer who has nearly constant employment cannot properly manage, and even this space, unless he has a large family, will admit of his occasionally producing articles for sale. Whether vegetables, fruit, flowers, seedling plants or seeds."⁴

1. Blair, M. The Paisley Shawl 1904 p.50 quoted by Smout op cit.
2. even in 1832 Cobbett found them destitute and with "not half a sufficiency of food of the very coarsest kind." see Cobbett W. Tour in Scotland and the Four Counties of England London 1833 p.179.
3. Neill, P. "Horticulture" The Edinburgh Encyclopaedia 1817 Vol. III p.185.
4. Loudon, J.C. Cottage Farm & Villa Architecture, p.1130

C. B. Allan¹, writing some ten years later, in 1849¹, confirmed the need for gardens of this size and he reiterated the evangelical and by now hackneyed views of one of Chadwick's correspondents on their value.

"on entering an improved cottage, with a neat and cultivated garden, in which the leisure hours of the husband are pleasantly and profitably employed, it will be found that he has no desire to frequent the beershop or spend his evenings from home: the children are trained to labour, to habits and feelings of independence, and taught to connect happiness with industry and to shrink from idleness and immorality."

A Highland crofter with his illicit whisky still would no doubt have smiled at such high-minded sentiments, but if the cottage garden fell short in meeting them, it also did not necessarily offer the freedom from poverty Cobbett and Loudon had hoped for. Tegetmaier in his Manual of Domestic Economy, (1862), quotes household income figures which show that a cottager with land to cultivate often lived as close to the breadline as a town dweller without a garden. The latter earned more but was likely to spend a quarter of his income on rent, while the cottager although he saved on rent and food found that his total earnings were frequently less than half those of the town dweller. Neither was able to save, and in sickness or old age had only the union poorhouse to fall back upon.²

1. Allen, C.B. Cottage Building: or hints for improving the Dwelling of the Labouring Classes London, 1849-50 p. 12.
2. Tegetmaier, W.B. A manual of Domestic Economy 6th ed. revised, London 1862. Chapter XIV pp. 116 ff.

As time went on, the opportunities of a modest self-sufficiency held out by the cottage garden of Cobbett and Loudon held less and less relevance for the urban poor, but more and more for those who had clamboured up to the lower middleclasses. Andrew Meikle, writing on the cottage garden for the Routledge Shilling library in 1874, thus addressed himself particularly to the clerks and small tradesmen able to commute to work by railway and horse-drawn tram from rented cottages on the outskirts of towns. By this time the ideal garden had shrunk in size;

"four to six hundred (square) yards is sufficient and will be found quite large enough for anyone who has other daily work on hand to manage properly, without calling in a jobbing gardener." ¹

Land prices on the edges of burgeoning towns and cities had long since made it impractical for working class cottages to be built with gardens of the size advocated by Loudon. What the industrious artisan might have wished for was a dream which the middleclass were later to realise on a grand scale in the lemon-squeezer roofed bungalows of the twentieth century garden suburb.

1. Meikle, A. The Cottage Gardener London 1874 p.13

SELF SUBSISTENCE ALLOTMENTS

The terms "small holding", "allotment" and "garden", have been so loosely and interchangeably used in the past, that definition becomes essential. Alan Thompson once defined a small holding as a place at the end of a muddy lane, where no tradesman will call. where there is no plumbing or electric light, but where all the relations want to come in the summer.¹ He was referring really to a self-subsistence allotment - that is, to a piece of ground cultivated in spare time to produce food for the holder's family. A small holding, on the other hand, like a croft, differs essentially from an allotment in providing the holder with a livelihood. This distinction cannot, however, always be clearly made, since surplus produce from allotments, and even from gardens, may often be sold.

A garden on the other hand can seldom be mistaken for a small holding, but it may well fulfil the functions of an allotment. The essential difference between a garden and an allotment is that while the first is contiguous with a dwelling, the second is usually not, but is, nevertheless, within convenient reach of a dwelling and may supplement a garden. Self-subsistence and the garden has been discussed in the preceding section: the present section is concerned with self-subsistence and the allotment.

The allotments movement so called, in Britain, has its origin for the most part in holdings of land set aside for the

1. Thompson, A. Your smallholding. London 1947 p.7

alleviation of rural poverty, to allow the agricultural worker to eke out his wages by growing food for his family.¹ Some date from local inclosures and were intended to offset the loss of common rights. The Commissioners of the 1845 Inclosure Act for example, had the power to specify where necessary, and as a condition of inclosure of commons and open fields, that land be set aside as "field gardens", and of up to a quarter of an acre in size.

Earlier private inclosure acts had sometimes included such provision, but none earlier than 1806, and even after 1845 the allocation of field gardens as a condition of inclosure was more honoured in the breach than the observance. Strongest opposition to them came from landowners and farmers more concerned with ensuring the whole attentions of a reliably needy labour force in working their own estates, than in encouraging a measure of self-subsistence to reduce the increasingly burdensome sums spent each year upon poor relief.

The earliest attachment of "field gardens" to the outskirts of large towns and cities, during the eighteenth and nineteenth centuries, was usually for rather different reasons, and had little to do with inclosure. In the first place, the subdivision and rental of this land as allotments was often far more profitable than its use for ordinary farming purposes - such land could be improved by the

1. Thorpe, H. et al. Departmental Committee of Inquiry into Allotments
Cmnd. 4166, Oct 1969. H. M. S. O. pp. 1-9

DISTRIBUTION OF 'GUINEA GARDENS' IN AND AROUND BIRMINGHAM
1824-5

FROM A SURVEY BY J. PIGOTT SMITH

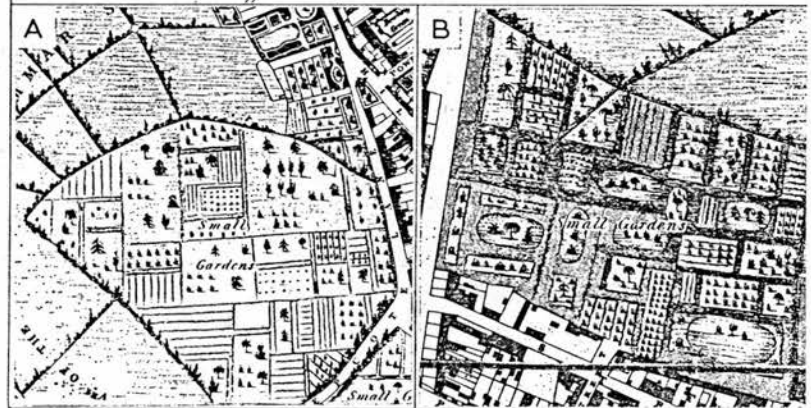
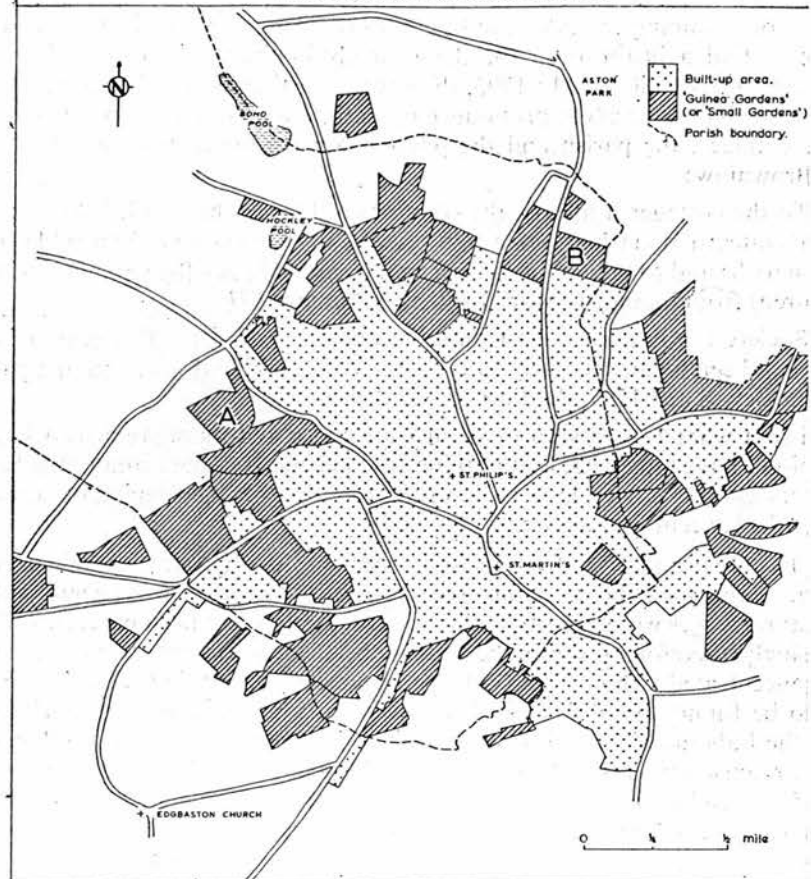


FIGURE 45a b
Birmingham's guinea gardens .

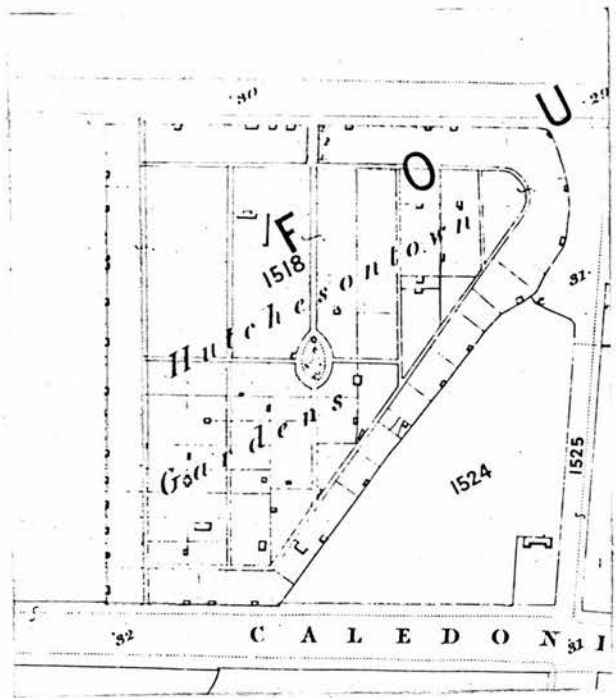


FIGURE 45b:

Examples of the equivalent in Glasgow of Birmingham's guinea gardens, serving the rapidly expanding hollow square tenement suburbs south of the Clyde; they offered the first generation of rural settlers a contact with their past and a means of supplementing their income. Bottom two show same allotments, Albert Gardens in 1861, changed by 1896 to Caledonian Gardens and with built up frontage.

application of the town's nightsoil to achieve prodigious fertility, and this gave many the incentive to produce cash crops to exploit a ready local market.

Where such competition did not force up rents, these allotments were certainly available to the urban poor as a means of providing food for their families against scarcity, high prices and unemployment; and in addition, many town dwellers seem to have been drawn to them for largely recreational and health reasons. Among the best known of these were the "guinea gardens" of Birmingham, so called after their annual rent. (Figure 45a)

An early newspaper of the city contained, in 1765, notices advertising the gardens, stating for example, that

"it is proposed that there shall be two rows of gardens with a walk nine feet wide between them."

In 1812 the same publication offered for sale a garden

"well planted with gooseberry and currant trees, fine raspberries, flowers, shrubs etc., and stocked with asparagus and vegetables of various kinds, containing a summerhouse..."

Several histories of the city refer to these gardens and they eventually existed in very large numbers around the urban fringe, (Figure 45b) ¹

Thorpe considered their cultivation to be largely recreational, and to be pursued mainly by the lower middle class, but, as their

1. Chadwick op cit p.275 saw them as providing a healthy outdoor recreation invaluable as a substitute for the alehouse and skittle alley.

peak of provision seems to have been reached about 1820, food shortages and high prices may well have been important inducements to cultivation. The rapid expansion of Birmingham after 1820, made this marginal land so valuable for building development that most owners were persuaded to sell; by 1886 a mere three sites remained & of these Thorpe reported only one still in use in 1968.

~~Other allotments attached to towns were provided by industrialists specifically for their own workers.~~ An isolated but important Scottish example was at New Lanark. Robert Owen housed most of his employees in small one and two apartment tenement flats detached from garden ground; to offset this deficiency, and as part of his experiment in socialism he provided allotments, intended to combine utility with communal recreation. Patrick Neill, Secretary of the Caledonian Horticultural Society, described them as follows:
 been

"There has long granted to each householder at New Lanark a portion of garden ground to cultivate; but in order to increase the supply of vegetable food, a new public garden has been laid out by the company, which is to extend to seven or eight acres. It is surrounded by a belt of planting, and a spacious walk for the recreation of the work people. This promenade, and others found for that purpose, to which they have access, commanding in every direction- diversified views of a beautiful country, may comprise an extent of probably not less than two miles; and in consequence of the limited hours of labour which prevail at this manufactory, they are thus enabled to partake of that exercise in the open air, which the nature of their employment renders absolutely necessary for a moderate degree of health and happiness." ¹ (Figure 46)

1. Neill P. "Horticulture". Edinburgh Encyclopaedia, 1830 vol. xii p.572.

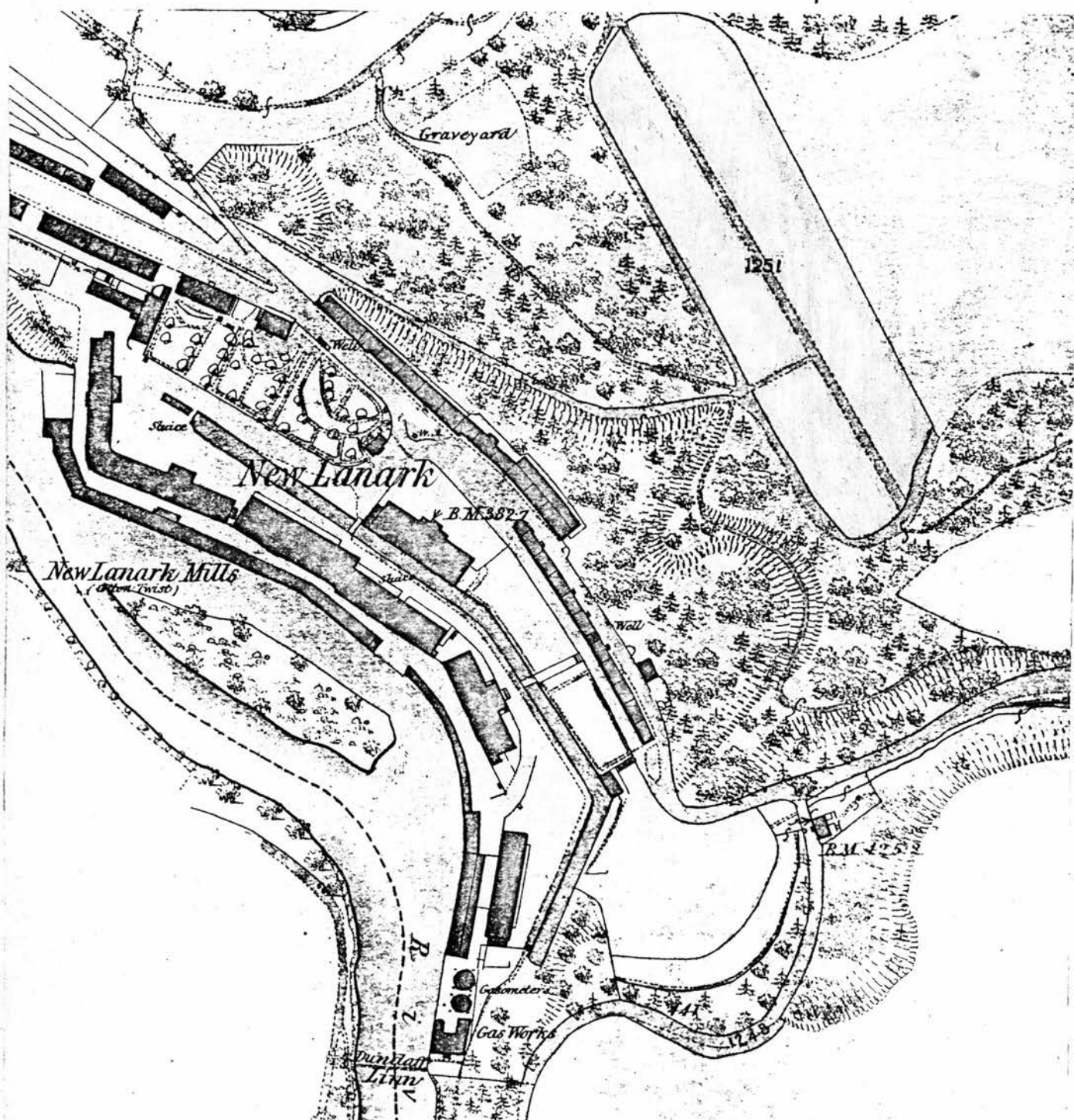


FIGURE 46 :
the allotments & public promenade formed by
Robert Owen for his workers at New Lanark, (marked 1251 on plan)
25" O.S. first edition .

Mrs Loudon in her book Philanthropic Economy of 1835 followed Owen's interest in devoting a chapter to

"The Small Allotment System".

She mentions a Mr. Smith of Southam in Warwickshire who divided one acre and its £5 annual rental among fifteen young boys; the boys paid the rent

"with ease out of the sale of their produce, besides supplying the fifteen cottages of their parents amply with good vegetables."

And on a larger scale, she comments on the care and attentions of many families with holdings of four, five or six acres, under their immediate eye and hand,

"for this is a limit within which the personal exertions of a family can still tell, that the results of the small allotment system, under all its modifications have been, and are likely to continue to be such as to yield the purest satisfaction to all friends of humanity."¹

She was of course describing allotments that were close to being small holdings.

Similar kinds of holding were sought for London's poor by a group of gentlemen including Chadwick's influential correspondent Dr. Southwood Smith.² In 1844 they founded a Society for improving the Condition of the Labouring Classes. This took over an earlier organisation, The Labourers' Friendly Society, which had sought to promote the "home colonisation" of underdeveloped land by settling the unemployed and impoverished on allotment-

1. Loudon Mrs. op cit p.180-181.

2. Octavia Hill's stepfather and described by Dickens in Plain Words Vol viii 1853 p.324 as "that indefatigable and useful sanitary reformer".

smallholdings.

The new society planned to build artisans' cottages and to provide loans, but it sought also to introduce allotments into the environs of London so that working men might grow their own produce

"to such an extent as materially to reduce if not entirely eradicate, the pauperism heretofore existing..."¹

The group became an exemplary housing society but failed to establish any allotments.

Other allotments of the field-garden type were provided by the wealthy and titled on their great estates; Those of the Duke of Northumberland at Alnwick were typical.² They were placed around the outskirts of the town to allow convenient access, and in total they exceeded twenty acres, (Figure 47). Regulations stipulated an annual rent of 6/3 for one tenth of an acre; that the ground be cultivated only by spade and with regular manuring and cropping; that no dogs be allowed, and children only if accompanied; and that the tenants be

"Sober industrious and of good character."

Most of the Alnwick allotments were let to labourers and working mechanics, but a few were let to tradespeople to gratify the Duke's desire to break down social barriers. All freedmen of the

1. The Labourer's Friend June 1844 pp. 1-2 quoted by Torn, J. op cit p. 5

2. Johnston G. The Cottage Gardener, Sept. 1852 p. 411 (this was a weekly journal which included a column on allotment farming).

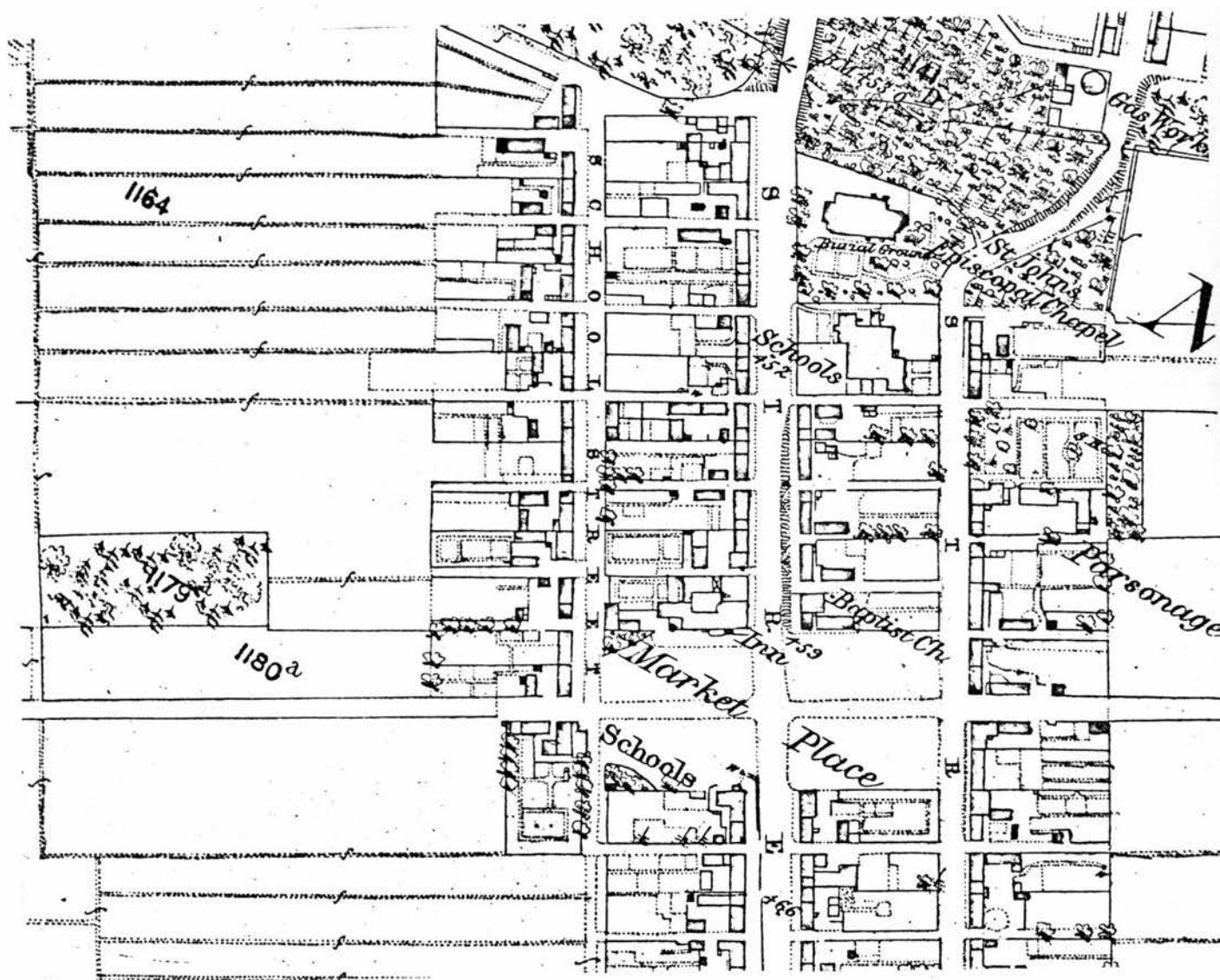


FIGURE 48 :
the cottings of New Pitsligo ; some directly adjoining
cottage gardens , others separated by a rear access, similar
to those in Fig 41b .
25" O.S. first edition .

town were entitled to graze a cow on the town moor, and many of the allotment holders grew swedes and winter keep for their animals; some also kept a pig, a goat or even sheep, and were therefore well supplied with manure. Each allotment was fenced and provided with a wall and the total income was said to be £3.2.6 an acre against the £4 an acre derived from surrounding farmland.

Other examples of these kinds of holdings, in England and Wales are described by Thorpe, most of them serving agricultural communities. In Scotland similar provision was made by improving lairds in the orderly "lottings" attached to the outskirts of new agricultural settlements like Tomintoul and New Pitsligo, (Figure 48).

Most of the so-called company town philanthropists also provided allotments for their workers. Regardless of higher motives they were shrewd enough to see in workers well fed from their own allotments, higher productivity and less trouble - but they were careful to keep them much smaller than the size recommended by Mrs Loudon. Titus Salt provided them at Saltaire, and so did Cadbury at Bournville and Lever at Port Sunlight.

But in general these more-or-less benevolent and self-interested sources of provision made little contribution to the great and increasing national need for allotment land, and the Commissioners of Inclosure contributed least of all. During the twenty four years following the General Inclosure Act of 1845, out of the 614,000 acres of land inclosed, a mere fraction of one percent

MY COTTAGE FARM

OF

EIGHT ACRES:

HOW I STOCKED, CULTIVATED, AND MANAGED IT,
AND REALIZED AN

ANNUAL PROFIT OF £240.

THE
AMATEUR'S AND COTTAGER'S
C O W.

HOW TO KEEP ONE

ALL THE YEAR ROUND,

ON THE PRODUCE OF A PLOT OF GARDEN GROUND,
50 YARDS SQUARE.

GARDEN GROUND,
AND

HOW TO MAKE THE MOST OF IT.

(NOTE.—THIS FORMS THE APPENDIX, OR THIRD PART, COMMON TO THE
COW, PIG, HORSE, AND RABBIT BOOKS.)

A SOW PIG OR £1,000!!!

An eminent Agriculturist lately said that he realized a larger annual
return from his one Sow Pig than the interest of £1,000 would
afford, invested in the Funds.

BY

KINARD B. DE LA BERE.

FIGURE 49 :

La Bere's handbook for allotment and smallholders .

was assigned for the use of the poor.¹

The inadequacies of this situation, and particularly the reluctance of farmers to respond to the demand to release more land, prompted a strong call for change. Something of the spirit of this call was caught in an engaging book The Profitable Keeping of livestock by Cottager and Amateurs, (Figure 49), published in 1879, by Kinard de la Bere. He combined in it a vigorous promotion of artisan self-subsistence with a general polemic on the land question, as follows:

"To encourage thrift and frugality amongst our labouring classes, I think it would be very desirable that a law should be passed to enable if not to compel, all Corporations, Boards of Health, and in Villages, Boards of Guardians, to acquire lands adjoining or in the immediate vicinity of all towns and villages - so many acres in proportion to the population of such town or village; and these lands should be let out at remunerative rents, in allotments and small holdings, to such applicants as may apply, and are able to prove themselves to be "fit and proper persons" to cultivate them. There are thousands of towns and villages, at the present moment, inhabited by as many thousands of sober and steady men, to whom a plot of ground would prove a great boon but where it is impossible to obtain a yard of ground, although the said town or village, as the case may be, is surrounded by large farms rented often very low, and a few acres taken from these farms would prove a great boon, to such people, even at greatly increased rents. I cannot see that even compulsory sale of such necessary area would inflict great hardship on either the tenant or landlord, as they would be paid its full value... The public generally have a vested right and interest in the soil of our country, entirely apart from the owner's rights, and this should not be lost sight of by our legislators."

1. Some 2,223 acres. See Hasbach W. A History of the English Agricultural Worker, (1908) p. 240, quoted by Thorpe op cit p. 12

In Scotland this demand for land distribution had relevance not just for the lowland poor, but also for the highland crofter. A crofter was of course essentially a smallholder,¹ but he was a small holder with an occupation additional to farming, and not merely a subsistence agriculturalist. As the handloom and other crafts became less remunerative, and fishing precarious and variable, he was less and less able to make ends meet if his crofting lands were poor and small. Crop failures, combined with rack renting and insecure tenancy threatened the collapse of the subsistence economy of the crofter, and led to increasing demands for more land.

In the South, the situation was aggravated by agricultural depression which produced widespread rural unemployment. The land question began to be taken more seriously and in 1885 it prompted the liberal election manifesto of

"three acres and a cow"

for every farm worker. That summer as Queen Victoria's long baggage train of grandchildren set out for Osborne, the Court librarian was heard to remark that every royal baby seemed to have

"three nurses and a cow".²

La Bere's book was evidently a best seller; it appeared in sixpenny parts, some of which sold over one hundred thousand copies and apart from his forthright stand in favour of allotments it dealt with the practical problems of raising a brood sow pig, hatching

1. The Napier Commission of 1883 had defined a crofter as "a small tenant of land, with or without a lease, who (found) in the cultivation of his holding, a material portion of his occupation earnings and subsistence"

2. Longford, E. Victoria R.I. London, 1964 p. 605.

and rearing chickens with an artificial mother, keeping a milchcow and rabbits, and driving, shaking, chloroforming and uniting bees, (Figure 49). In short it was every allotment and smallholder's vade mecum.

The profit motive in all this was uppermost, and it was clearly explained by a correspondent of Robinson's The Garden as follows:

"A good deal of sentiment", he felt, "has been talked about gardening as a recreation for the working man, the moral influence it exerts, etc. and there is no need to dispute the good results in this way: but those who know most about it will tell you that the cottager looks upon his garden pretty much in the same light as a market gardener, and that the sure way to make him take an interest in it is to show him that it will pay."¹

It was the profit motive therefore that was really responsible for blurring the distinction between an allotment, a small holding and a garden.

An effective increase in allotment land at last became imminent with the extension of suffrage to rural property owners in 1884.² Largely through the lobbying of "allotment" candidates, the Allotment Act of 1887³ and the Small holdings Act of 1892⁴ were passed. In Scotland the equivalent legislation was the Allotments (Scotland) Act of 1892,⁵ and in 1886 the crofting small holders were given absolute security of tenure under the Crofters Holdings (Scotland) Act.⁶

1. ibid December 4 1875. p.490.

2. 48 & 49 Vict. Ch. 3.

3. 50 & 51 Vict. Ch. 48.

4. 55 & 56 Vict. Ch. 31.

5. 55 & 56 Vict. Ch. 54.

6. 49 & 50 Vict. Ch. 29.

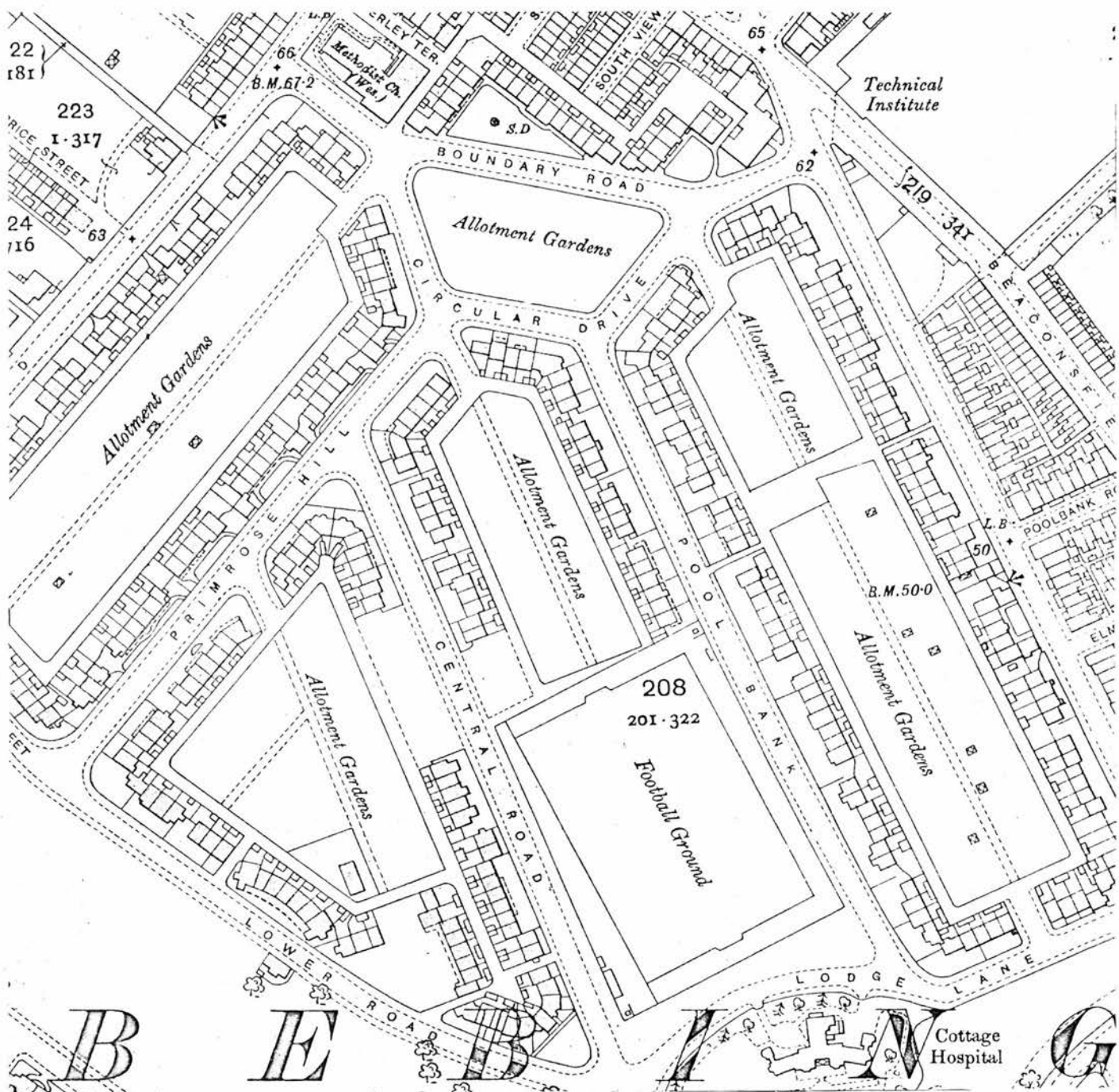


FIGURE 50 :

Detail of housing area at Port Sunlight showing the very great emphasis on allotments . Parker & Unwin & later planners tended to scale down this lavish provision to more modest proportions. In providing them , Lord Leverhume was clearly responding to those who like Cobbett , saw the cultivation of a piece of land as essential to the dignity of the working man, and as an ideally healthy and moral recreation . The Sunlight Yearbook for 1898 describes them as follows :

" within sight of most of the houses are the "allotment" gardens , for which the demand is greater than the supply these gardens form one of the sunniest features of Sunlight Village . About eight rods of ground go to a garden , & the rent ... is one shilling a year, (including) water taps . Happy gardeners to have water laid on even at the roots of your cabbages ! An "eighthours" day is the rule at Port Sunlight . Work begins at seven and stops at five , with an hour & a half for meals . There is a long evening therefore for gardening

All this legislation certainly helped to stabilize and increase the amount of land made available to those at subsistence level. It also marked a point in time when the term "allotment" became increasingly identified with spare time and increasingly urban garden pursuits, as distinct from the more rural connotations of the term small holding. But these distinctions were not helped by people like Ogilvy in 1890 defining allotments as:

"pieces of land applied for by those who... have no wish to change their occupation, and who also want a home, but who do want to add to their work by devoting their spare hours and days off to growing food for their families, and supplying extra comforts by the sale of surplus produce produced." ¹

This was really a prescription not for allotments, but for suburban small holdings.

A more useful distinction made, was between "garden allotments" so called, which were generally regarded as less than a quarter of an acre and spade cultivated, and "farm allotments" or small holdings, which were frequently larger and often cultivated by plough. By 1887 Thorpe considered that nearly two-thirds of all allotments in England and Wales were "garden" in character ² and although self-subsistence was an important consideration in many, at least part of the secret of their popularity was the prodigious and rapidly increasing interest in the recreation of horticulture; this was not simply a passion of the middle class with their

1. Ogilvy, A. (Vice-president of the Land Nationalisation Society) "Land Nationalisation" in The Co-operation Wholesale Societies Ltd. Annual, 1890 p.148.

2. Thorpe, op cit p.15

conservatories and leisure - by far the greater number of the pottering British public were the humble but literate clerks and artisans, whose interests in cultivation were fed by an ever increasing press of cheap gardening weeklies and popular handbooks.

It was hardly therefore surprising that Lord Leverhume should have included so many allotments at Port Sunlight, (Figure 50), or that Booth's farm colony proposals (p.170) should have laid such stress on the development of "allotment farms" around each settlement; Both proposed an annual exhibition at which all colonists exhibited their allotment fruit and vegetables as well as rabbits and poultry.¹ Kinard la Bere would have rubbed his hands with joy.

With such an interest, and so many precedents, it was natural that Parker and Unwin should have included garden allotments in the first of their town planning essays at New Earswick in 1899; and in their better-known later work at Letchworth, Welwyn and Hampstead, allotments became an essential part of the image of the garden city and suburb.

The 1892 legislation was followed by further allotment acts in 1907 and 1908² which in effect became the basis of the modern allotment system, and which restated the obligation of local authorities to provide allotments for the labouring classes. But by far the greatest impetus in the provision of allotments were the two world wars.

1. Booth op cit. pp.124-5.

2. 7 Edw. 7 ch. 54.

Under the Defence of the Realm Act of 1916¹, local authorities were required to press into cultivation any suitable open space or undeveloped land, & it became imperative that this land should be conveniently close to those able to care for it. The total number of allotments rose by 1918 to one and a half million.² In Glasgow alone there were 5,778, and of these nearly 1500 had been put down in parks, on playgrounds, football and games pitches, and to a standard size of two hundred square yards. The Superintendent of Parks estimated that in 1918 Glasgow allotments produced 2552 tons of potatoes, and nearly half a million plants of other vegetables.³

Similar emergency legislation during World War II again brought nearly one and a half million allotments into cultivation, and, stimulated by the "Dig for Victory" Campaign, by the end of the war, these were producing some ten percent of the nation's total food requirements.⁴ The victory garden made a substantial contribution to the resourceful austerities of World War II cooking. Without it, it is doubtful if we would have been given the recipe for Thespis Stew by Sybil Thorndike, or the still more appalling Alamein Pancakes of Lady Montgomery.⁵

Both post war periods saw a decline from this peak of allotment gardening, but whereas the depression had helped to slow

1. 6 & 7 Geo. 5 ch. 63.

2. Thorpe op cit p. 16

3. Report : Garden allotments, Season 1918 Vol 9 Town Clerks Office Corporation of Glasgow. p. 590.

4. Thorpe op cit p. 19

5. ed.: Countess of Effingham, Fare-ye-well with Ladies of the Realm, London 1944 pp. 68 & 20.

down the reversion of allotment land to other uses, there was a rapid loss during the fifties and sixties as food rationing ended and as the nation became more affluent and able to indulge in the greater range of recreations conferred by car ownership and cheap petrol. These fluctuations in demand are clearly reflected in the figures given in Table 1 for allotments provided by Edinburgh Corporation.¹

Table 1

Allotments Provided By Edinburgh Corporation 1928 - 1974

Year	1928	1933	1938	1943	1948	1953	1958	1963	1968	1974
No of Allotments	1476	2402	1803	4232	3629	2388	1749	1508	1318	1118
% of 1943 Provision	35	57	42	100	86	56	41	36	31	26

Demand since that time has consistently exceeded supply,² partly at first through an increasing middle class interest in home-grown vegetables and the pleasures of cultivation, and more recently for the economies offered. Since we can no longer expect to meet this demand by encroaching substantially upon existing parks and open spaces, except in times of national emergency, the future provision of urban allotment land, and the standards by which it is assessed are of critical importance.

1. Updated from Jessop et al Open Spaces Plan for Edinburgh p. 62

2. At the end of 1974, the waiting list for an allotment in Edinburgh was 213, but according to the Parks Department, many others had enquired and when told the size of the list had not bothered to add their names to it.

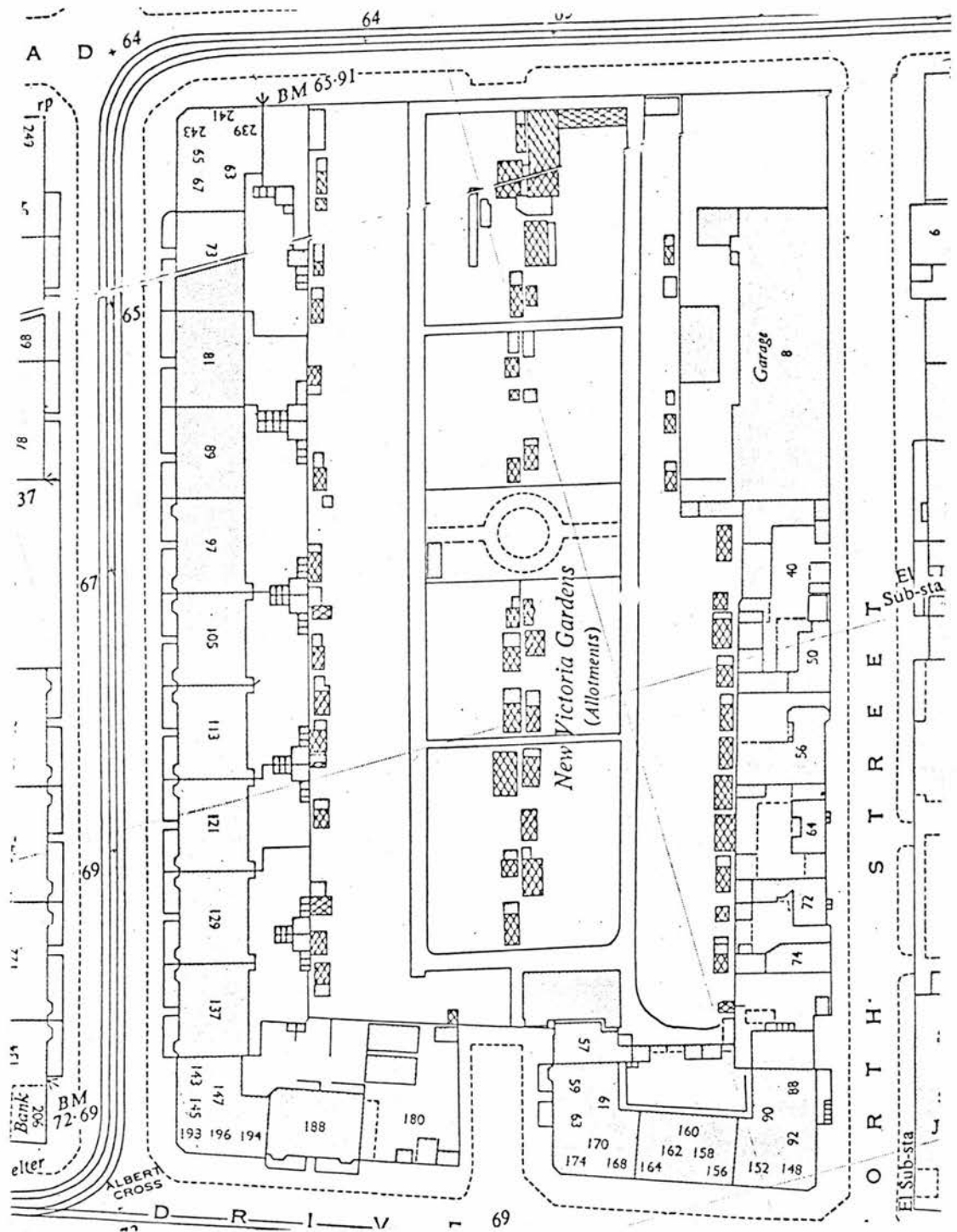


FIGURE 51 :

New Victoria Gardens , Pollockshields , Glasgow . These were established in the late Nineteenth Century by Sir John Stirling Maxwell , on part of his large estate , and to meet the needs of the surrounding tenement dwellers . They were originally intended solely for floriculture . In 1970 this tradition still persisted , with an annual dahlia & chrysanthemum shows , but only a quarter of each allotment was required to be given over to flowers . In 1964 a local housebuilder was refused planning permission to develop the site after strong representations by the local people . There are sixty allotments here & until recently , most were cultivated according to the Secretary , by those who were " getting on " , and the gardens were slipping into a decline . Since that time interest has greatly revived . In 1971 the Director of Glasgow Parks Department reported over 100 Corporation allotments unlet . In 1975 there was a waiting list almost as large .

In 1949 The Allotment Advisory Committee recommended a standard of 4 acres/1000¹. In Scotland, as elsewhere, this has proved to be usually unattainable, since, in effect, it has meant the setting aside of two acres of allotment land for every ten acres of medium density housing: and yet this standard is not generous at least by those of the Duke of Northumberland at Alnwick; and assuming an average plot size of 320 square yards it means that less than one in three households may have an allotment. While such a balance might be adequate in developments containing houses with private gardens, there are very many instances of flatted developments built in Scotland since 1949 which fall far short of providing even this minimum of allotment space.

Many of these were justified at the time by the sharp fall in demand during the 'fifties and 'sixties. At the ILA Symposium of 1961 for instance, Gillespie reported a survey showing that demand had dropped to less than one allotment for every thirty households;² the results of this survey greatly influenced the detailed planning of Cumbernauld New Town where there are today no allotments.

The Edinburgh Open Spaces Plan, in reviewing the distribution and use of allotments in the city in 1969, like the Thorpe Report, recommended that the means of supplying enough urban allotments in the future, lay in the convenient extended access to outlying land provided by the car. They saw opportunity for developing

1. Allotments Advisory Committee Report on Allotments (1950) H. M. S. O.

2. ILA Symposium The Organisation of Space in Housing Neighbourhoods. May 1961 p. 19.

large sites on peripheral and greenbelt land, well-serviced and well-supervised; and developed with additional recreations to attract the whole family. They did, however, concede that there was still a need, especially felt by older people, for small allotment areas close to housing areas without gardens.

Neither of these reports anticipated the recent very sharp restrictions on the effective mobility of the private car, and while the shortage of inner area land for allotments make the greenbelt proposals still attractive, their real long term value will probably depend on greatly improved public transport. Nor did they anticipate the sharp increase in demand largely for reasons of self-subsistence. This latter, combined with the present general need to save energy and reduce travelling has in effect placed a much higher premium on providing as many allotments as possible within local open space.